Phytogen October 2019

Sally Smith memorial this Friday and Phytogen.

23 October 2019

Dear ASPS Members,

A reminder there will be a gathering on Friday October 25th 2019 to celebrate the life of Professor Sally Smith a long-standing member of ASPS who passed away suddenly on 13 September 2019.

The gathering will be at Adelaide University's Waite Institute, Beltana Café, McLeod House on the University of Adelaide Waite Campus, at 4pm on 25 October 2019. For further details and to RSVP please use this link.

Photos and memories as part of our ASPS tribute for Sally have been gather by Dr Stephanie Watts-Williams and can be access through Phytogen here.

Vale Professor Sarah "Sally" Smith.

The October issue of Phytogen can be accessed here.

October 2019 Phytogen

19 October 2019

Welcome to October Phytogen. Hope you are making preparations towards our meeting in November. You can still register, use this link: https://www.asps.org.au/combio/asps-2019/about-asps-2019 Well, it has been our 60th year and Professor Roslyn Gleadow (@RosGleadow) from Monash University has written a reflection for us. Roslyn will be delivering the JG Wood lecture on Thursday 28th November. View the draft ASPS2019 program HERE

Reflection by Roslyn

Kingsley Rowan, my MSc supervisor, was a founding member of ASPP (as it was then). He walked into my office one day and said: "You should join the Society — and subscribe to the journal too." (referring to the Australian Journal of Plant physiology, now Functional Plant Biology). So, I did. I've been a member ever since, even when I was out of research when I had my kids. I dropped getting the journal when I got a job working for Editor-in -Chief Laurie Martinelli as a copy editor for a while, but it's still on my regular reading list.

People often wonder what is the point in joining professional societies? One important reason is that it provides a respectable, identifiable organisation for journalists to contact, and you can't have a society without members. When I was President I often got calls from the media (e.g. the ABC, SBS, The Age etc.) to provide expert commentary on various things relevant to plants, GMOs, climate change and so on. This is really, really important. Even more so now with all the crazy ideas out there in internet-land. I am now President of the Global Plant Council (of which ASPS is a member organisation) and we are aiming to be a reliable point of contact for media and policy makers at the international level.

I believe there is strength from being part of professional societies such as ASPS. I've been a regular ASPS/ComBio attendee and enjoy the way these conferences stretch me beyond my comfort zone and force me to think about things outside my own immediate field. The national-scale networking is also invaluable. I couldn't travel overseas for what seems like decades when my children were growing up (plus the money issue, or lack thereof). Going to the annual meetings was my only option. I often only went for 2 days, timed to coincide with particular international speakers (who I made sure I met) and the annual society dinner, which was always fun. I organised that one year, so I know how much work it is herding cats, but well worth it. The contacts with leading national and international scientists have stood me in good stead – I have had long standing collaborations with several of them ever since.

There was a seismic shift in plant physiology in the 80s and 90s with the enormously valuable input from molecular biology. This created a dilemma: should we join with the ASBMB and ANZSCDB as 'ComBio' or go it alone? The advantage of having a combined meeting is that there is a lot of overlap and people will only generally go to one generalist, national meeting. Also, being a bigger meeting, the trade fair is bigger, and ASPS receives important income from that. The downside is that we have to work hard to keep our identity, especially we ecophysiologists[1]. The new system of alternating a plant-focussed meeting with ComBio seems like an excellent solution and hats off to the Council who agreed to do this.

Next month is the first of the new-look ASPS meetings. Last time I went to ASPS at La Trobe it was on at the same time as ASBMB, which was in downtown Melbourne, and people were racing between the two by car. Crazy! I encourage you to come and learn stuff, give back, participate in some informal mentoring and make some life-long friends.



Prof Ros Gleadow, President ASPS 2010-2012 with cassava varieties and Bec Miller from University of Melbourne.

[1] The satellite “EcoFizz” meetings started by Susanne Schmidt, Mark Hovenden and me, and followed by Oula Ghanoum and David Tissue were great – does someone want to start those again?

SCIENCE MEETS PARLIAMENT CANBERRA NOV 26 & 27 - 2019

Science & Technology AUSTRALIA

Science meets Parliament is designed to bring together decision makers and Australia’s leading STEM professionals, to promote the role of science, technology, engineering and mathematics – and the valuable part these sectors can play in politics.

This will be the 20th year and ASPS will be represented by Tracey Cuin and Ricky Milne

You might remember an inquiry has been launched by the Standing Committee on Agriculture and Water Resources. It is of particular interest to members of ASPS and Tracey Cuin and Mike Haydon are preparing a submission. The link information for the inquiry can be found here and submissions close Thursday 28th November.

If you haven't managed to send suggestions to the ASPS secretary Vanessa Melino (vanessa.melino@unimelb.edu.au) have a go now. This is a great opportunity for us to drive policy. I was at a workshop last week where it became evident how important this is. It it is for us to come up with clear policy with your suggestions of key priorities for plant/agricultural sciences in relation to the terms of reference: "The Committee will inquire into and report on, the opportunities and impediments to the primary production sectors realising their ambition to achieve a combined $100 billion value of production by 2030." You also might find it interesting to read this discussion paper.


Image courtesy of KPMG

Celebration of Professor Sally Smith

A reminder there will be a gathering on October 25th 2019 to celebrate the life of Professor Sally Smith a long-standing member of ASPS who passed away suddenly on 13 September 2019.

Sally was Emeritus Professor in the School of Agriculture, Food and Wine, University of Adelaide. She was also Honorary Professor at the China Agricultural University and the Chinese Academy of Sciences.

Sally was a world authority on the mycorrhizal symbiosis between plants and fungi. She made outstanding contributions to our understanding of the structure of the plant-fungal interface, of nutrient transfer across it and of the molecular processes involved in forming and controlling the interface.

Sally completed her BA and PhD at Cambridge (1965) and her DSc at the University of Adelaide (1991). She held a personal Chair in Soil Science (1995) and was Director of the Centre for Plant Root Symbioses (1998). She was elected to the Australian Academy of Science in 2001. Just two months ago, Sally obtained an inaugural 'Eminent Researcher' award from the International Mycorrhiza Society. To celebrate her life there will be a gathering at Adelaide University's Waite Institute, Beltana Café, McLeod House on the University of Adelaide Waite Campus, at 4pm on 25 October 2019. For further details and to RSVP please use this link. If you would like to share information, photos or memories as part of our ASPS tribute for Sally, please share these with Dr

Stephanie Watts-Williams (stephanie.watts-williams@adelaide.edu.au), who is kindly leading our creation of an ASPS tribute.



Vale Professor Sarah "Sally" Smith

06 October 2019

Dear ASPS Members,

Professor Sarah "Sally" Smith

It is with sadness that we inform you that Sally Smith, a long-standing member of ASPS, passed away suddenly on 13 Sept 2019.

Sally was Emeritus Professor in the School of Agriculture, Food and Wine, University of Adelaide. She was also Honorary Professor at the China Agricultural University and the Chinese Academy of Sciences.

Sally was a world authority on the mycorrhizal symbiosis between plants and fungi. She made outstanding contributions to our understanding of the structure of the plant-fungal interface, of nutrient transfer across it and of the molecular processes involved in forming and controlling the interface.

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If you would like to share information, photos or memories as part of our ASPS tribute for Sally, please share these with Dr Stephanie Watts-Williams (stephanie.watts-williams@adelaide.edu.au), who is kindly leading our creation of an ASPS tribute.

Kind Regards,

Professor Kathleen Soole

President – Australian Society of Plant Scientists (www.asps.org.au)

Foreword by Stephanie Watts-Williams

I had the pleasure of first meeting Sal in 2014 on a visit to the Waite campus during my PhD. Since then, and especially since I moved to Adelaide more permanently in 2016, Sal became a fixture in my academic life. I looked forward to seeing her and Andrew at each fortnightly lab meeting – still amazed at how lucky we were to have her joining us long after her retirement. Sal was always generously giving feedback to myself and my PhD students, thereby helping to shape the research of young mycorrhiza research scientists, right up until her last months.

Below, I have collected tributes from ten of Sal's colleagues, students, and friends from the last 30 years. There is a clear theme of warmth, mentorship and of 'belonging' when you were part of Sal's lab. The photos that were sent to me also convey Sal's legacy as a researcher – hard-working, well-respected, and collegial. She will long be remembered in the halls of the Taylor and Davies buildings, the Waite campus, and the wider scientific communities nationally and internationally.

Sandy Dickson – Volunteer Worker (1988), Technician (1989-1996), PhD student (1997-1999), Post-doctoral Research Fellow (2001-2005, 2007-2009)

Over the course of 30 years Sal has been my mentor, supervisor, colleague and above all, my friend. Her enthusiasm for mycorrhizal research inspired me to pursue a career in the field which I maintained for 20 years and still think about regularly. I enjoyed being her demonstrator for several workshops and we enjoyed many conferences together. She had a persistence of never giving up which also extended into her birdwatching (which she also encouraged me into), and we continued to tease each other on what we had recently seen. She will be sadly missed in the symbiotic community and never forgotten.





Evelina Facelli – Technician (1992), PhD student (1993 – 1999), Visiting researcher (1999 – 2006), Post-doctoral Fellow (2006 – 2010), colleague, mentee and friend (2010 onwards)

I started working with Sal as a technician in April 1992. Being a plant ecologist, I knew just a little about mycorrhizas but Sal's contagious passion for their study soon seduced me. I found the lab meetings intellectually exhilarating. Sal would listen to each of us attentively, and provide advice on protocols, suggest readings, and importantly, made us all engage in the reasoning and learning process. So, towards the end of the year, I gathered courage and asked her to be my PhD supervisor. There was a problem: I could not commit to work long hours as I had two young kids. She readily accepted the situation, with understanding and encouragement: "I know…I have been there…, you want to run away at 3:30 to fetch the kids from school, like Cinderella, before your car turns into a pumpkin… go for it!". She was an awe-inspiring woman. I admired her frankness (I was surprised how frank she dared to be!) and honesty. She was an outstanding supervisor. She could see the strengths in her students and foster and help to develop them, as well as helping to overcome our limitations. Personally, I found our regular meetings very intense, challenging and highly formative. She spotted the stones on the path but never removed them from me. In time, the intense meetings turned into friendly chats where she shared her experiences not only as a scientist but as a woman and a parent. I found support and solace having a chat with her during challenging moments in my life, her door was always open.

Her love for true science and nature had a profound influence on who I am now, and I know that through me she touched those who I love. It is a privilege having had her as a supervisor, a mentor, and a friend.






INTERNATIONAL CONFERENCE/WORKSHOP ON MYCORRHIZAS
"MYCORRHIZAS IN SUSTAINABLE TROPICAL AGRICULTURE AND FOREST ECOSYSTEMS"
BOGOR, INDONESIA, 17 - 30 OCTOBER 1997




International Conference and Workshop on Mycorrhizas
"MYCORRHIZAS IN SUSTAINABLE TROPICAL AGRICULTURE
AND FOREST ECOSYSTEMS"







Patrick O'Connor – Honours (1993-1994) and PhD (1996-2001) student

I hear my university colleagues talk about how they supervise their post-graduate students. The meetings, discussions, structured exercises, workshops. What I rarely hear are the approaches that made Sally Smith such a fantastic mentor; a desire to understand each student, what they need and how they can be assisted to find their way into the field of research. For some students that meant helping with topic refinement, experimental design, writing skills, or time management. For me, Sally encouraged my desire for exploration of the enormous ballet of connected life. Sally added discipline and her own curiosity to my immature wonder at how the world is held together with trillions of small exchanges between parties trading in different currencies, different languages and different time zones. Sally helped me open up a view on the world of mycorrhiza that no one else could have because no one had her depth of knowledge

and passion for the subject. What I learned about research from Sally has been fundamental in my journey as a researcher and consultant. I hope I am half as good as a mentor for others as Sally was for me.

Lingling Gao – Visiting Scholar (1997-1998), PhD student (1999-2002), Post-doctoral Fellow (2002-2003)

My family and I have found it hard to accept the loss of a most respected supervisor, a great personal mentor and a dear friend, Professor Sally Smith.

I had the privilege to meet Sally in 1997 when I first moved from China to Australia. Sally was my supervisor for 5 years, including one year for my visiting study, three years of my PhD and about one year of my postdoc. Sally guided and supported me though the most difficult period of time I had in Australia. She helped me obtain a scholarship which allowed me to carry out my PhD study. With her enormous encouragement and generous help, I was able to break through many barriers to succeed in my PhD and build up a strong foundation for my scientific career. Her love and kindness also earned my trust and respect as such in the past 20 years she had been the first person in my mind to speak to whenever I faced challenges. With Sally's wisdom and mentorship, I was able to overcome those challenges. Sally not only changed my life but also changed the life of our entire family. She will stay in our hearts forever.

Tatsu Ezawa – Post-doctoral fellow (1998-2000)

In the late August 2019, I asked Sally to read my manuscript critically, and a week later, she returned it with lots of comments. Andrew Smith told me that it was the last professional activity in her life.

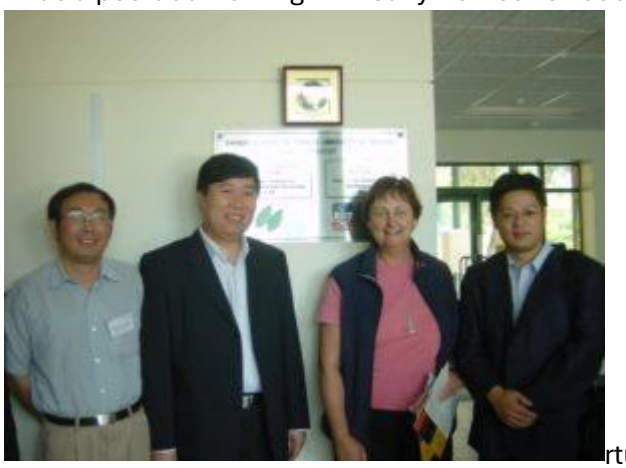
In early 1998, Sally was waiting for a long time to pick us up at Adelaide airport. It took more than 30 min to persuade Australian quarantine that my isolate (I brought from Japan) was clean enough, even though I had a permission letter. She smiled and whispered in a low tone, "They are ALWAYS like that." Soon after I joined the lab, I found that, amazingly, she knew everything published in the past. "You should read Capaccio and Callow published in New Phytologist in 1982, which (a copy) you can find in the second drawer of the cabinet!" she said in a high tone. There were many Asians in the lab, and we always acknowledged her Queen's English. We could understand what she was speaking, even if she was 20 m away from us. I miss her voice.





Yong-Guan Zhu – Post-doctoral researcher (1998-2002)

I was a postdoc working with Sally from June 1998 to Jan 2002, and I feel very fo



rtunate to have such a great mentor in the critical period of advancing my career. Sally was always encouraging and positive about what I did, even at experimental failure, which gave me much confidence in developing new ideas.

English is my second language, and I have particularly benefited from Sally's supervision in writing and editing research articles, and this even continued after I returned to China running my own lab, as she was our honorary professor at the Chinese Academy of Sciences, with the establishment of a joint lab.

I am forever grateful to Sally's excellent supervision and inspiration, and I will certainly pass this on to future generations of scientists through my own students. Sally lives in our minds forever.

Tim Cavagnaro – PhD student (1998-2001), Postdoctoral researcher (2001-2003)

In the final semester of my undergraduate studies I took Sally's course in Soil Biology and Biochemistry. She spoke on the topic of mycorrhizas (and indeed all things soil biology) with such enthusiasm and excitement that I was inspired to pursue a PhD under her supervision. Sally had an unparalleled knowledge of the literature, but more than that, she was able to explain its significance and meaning to any and all. She taught me many lessons over the years, including statistical significance and biological significance are not synonymous, nor are expression of the transporters and fluxes across the membranes, and that when things when things go wrong it is all part of "life's rich pageant". I fear that Sally often despaired of my writing (and excessive use of commas), but she patiently worked with me to improve in this and other areas. Sally continued to support me well beyond my time as a student and postdoc in the lab – she was always happy to offer advice, and if ever in doubt I ask myself the question: What would Sally do…? The last time I saw Sally was in our regular lab meeting – as always, she shared sage advice with the group and encouraged students in their work. I think the most the most important lessons I learnt from Sally were about the type of scientist I aspire to be. Sally was a mentor, trailblazer, inspiration and above all a friend. Having read the words of my friends and colleagues above, I know I am not alone in this sentiment.

Liz Farquharson (nee Drew) – PhD student (1999-2002)

SE Smith

S is for **Sal**. From students to professors she was almost always 'just' Sal. I have many fond memories of sharing lunch and conversation with Sally and Andrew Smith in the soils tea room through my PhD years.

E is for **Enthusiasm**. In all she did from lectures in soil biology, to supervision of students or bird watching camping trips, it was fantastic to spur you into action.

S is for **Science** & **Spelling**! Sally valued ideas, critical thinking, good science and great writing. Her editing skills were impressive and she could turn around a thesis chapter in one weekend!

M is **Mycorrhiza** (of course!) – Her contribution to this field of research will endure.

I is for **Intellect**. Sharp and savvy, always thinking, always a question and a memory of the literature like no other. Sally could pull a reference from 20 years ago seemingly out of thin air and provide full details almost to page number.

T is for **Teacher**. Sally taught me how to be a researcher; how to go about asking the right questions and then how to go about finding the answers to them.

H is for **honoured**. Sally was a highly valued member of the University of Adelaide and the wider scientific community. Her influence in shaping the careers of so many is a tribute to her value, as a fellow human and as the brilliant researcher she was. We can each honour her life when we put in to practice what we have learnt from her.

Our deepest condolences go to Professor Andrew Smith and their two daughters.

Jean-Patrick Toussaint – PhD student (2004-2008)

In 2002, with my Masters in hands, I timidly but boldly emailed Sally Smith. Not only did Sally accept that I come visit her lab for 3 months (from Dec '02-Feb '03), she also provided support and much guidance during that time. So, almost two years later, in August 2004, I went back to Australia to start my PhD in Sally's lab; she gave me the flexibility and freedom to explore my creative ideas, challenged me to define the best protocols I needed to test my hypotheses and provided me with a wealth of knowledge on the basic understanding of this field of plant physiology;

Of course, Sally was a brilliant academic – but she was also an exceptional female mentor and role model: she provided strong guidance to students she took under her wing, doing her best to offer as many professional/speaking experiences as possible; she was a force to reckon with, who would not shy away from a prickly scientific conversation or dispute…and certainly not from male figures who would think a bit too much of themselves; moreover, she was ruthless with English grammar;

It is hard to capture into words all of Sal's legacy – not only for the academic world, but also for the person that I became; she has very much imprinted my own personal and professional journey, and I could have never thanked her enough for everything she's done and was.









Rebecca and Jamus Stonor – Technical assistant and lab manager (Rebecca; 2005-2013)

The last time I saw Sally she was spritely and full of life. She threw her (hefty) bird watching telescope and tripod over her shoulder and we marched over the sand dunes to the beach… Sally to me was less of a supervisor, although she was that too, and more of a devoted mentor. She was an inspiring role model, especially for a young woman in science, but above all else and especially later I considered her to be a friend. Despite her high position and achievements she was always interested in what was going on in my life; how the kids were and how well our tomatoes were growing in the veggie garden at home. Over coffee in the tearoom we had endless conversations about the lack of rain, the state of the environment, birds and flowers and plants thriving or barely surviving in our gardens. I still can't believe she's no longer with us, but feel immense gratitude for having her in my life. She is gone now from this Earth, but there are many lovely reminders of her; the special irises she gave us will bloom every spring in our garden and I will always remember Sal.









