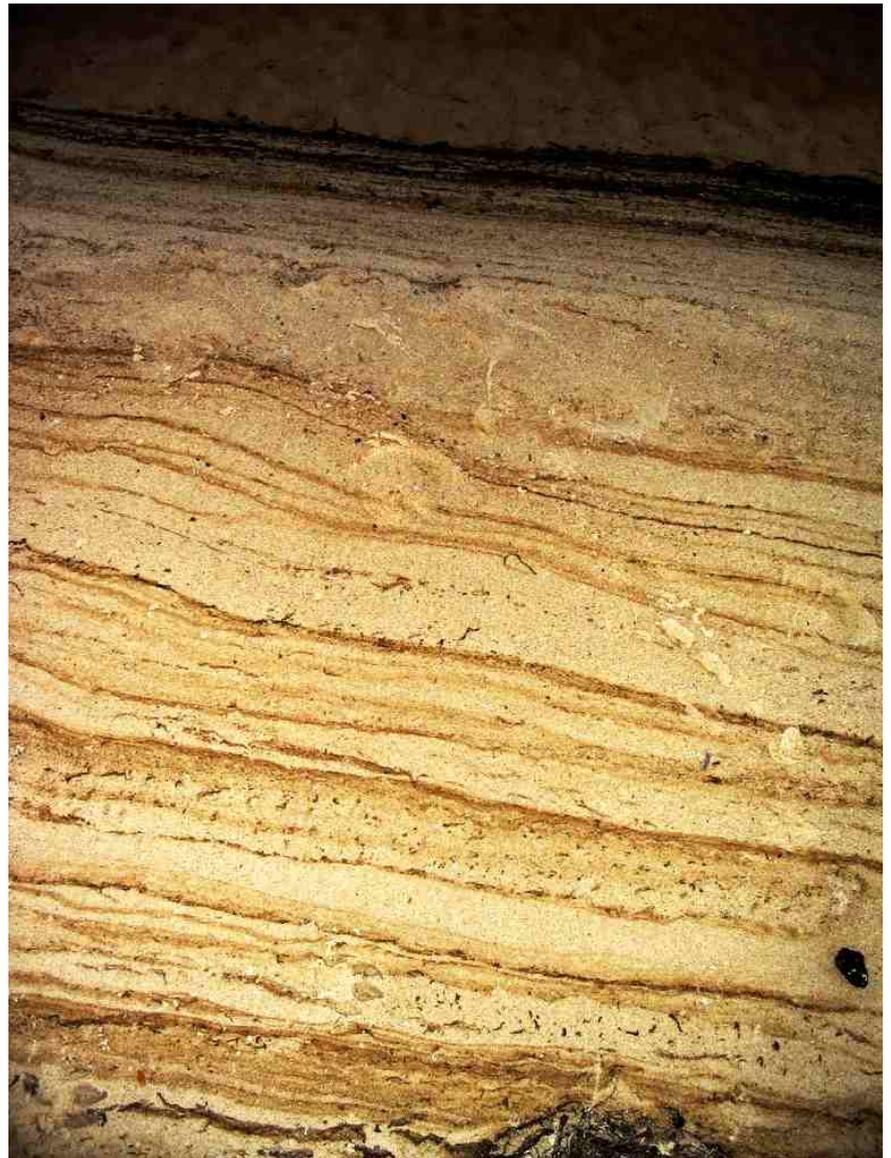


## In this Issue

Editorial	2
ASSSI Information and Dates	2
President's Column	3
Awards	4
Proposed New Award	4
2010 Soil Art Calendar	5
New Members	6
New Member Profile: Sola Ajiboye	6
Appointment for Rick Morse	7
Vale Cliff Gurr	8
Leeper Lecture	9
2008 NZ Soils Conference	9
NZ Conference Reports	9
Field Trip Report: NSW Branch	11
Northern Territory Excursion	12
Soil Chemistry Workshop: QLD	13
CPSS Chairman's Report	14
CPSS Comment	14
Soil Care Workshop	16
Branch Reports	
Queensland	16
Victoria	17
South Australia	18
Media Releases	19
WCSS 2010 Postcards	21
Events	21
Federal and Branch Contacts	22
Australian Journal of Soil Research	23



**Soil Art**

Photo by Cara Beale

Taken on Home Beach, North Stradbroke Island, Queensland, this photo shows the influence of leached tannins from an upstream melaleuca wetland.

## Editorial

In taking on this role as editor of *Profile*, it will be hard to fill the shoes of Rebecca Lines-Kelly. I would like to take this opportunity to thank Rebecca for her marvellous job taking the newsletter to the polished product it became.

To suit my desktop program, a few changes have been made to the layout of *Profile* but it will still be recognised right down to the showcasing soil art photography that was Rebecca's inspiration. Content and structure remain much the same. This editorial and the president's column follow tradition as does much of the content of this issue including new members, an obituary, field trip and excursion reports, workshop and conference reports, CPSS reports, forthcoming events, ASSSI federal and branch contacts and the list of latest papers from the Australian Journal of Soil Research.

Rebecca was going to put her feet up after relinquishing the *Profile* editor's role but it appears she can't stop and is now working on a Soil Art Calendar. I think this is a great idea and details are given on page 5 of this issue. Nominations are being called for the Prescott Medal, Publication Medal and the CG Stephens PhD Award. Ideas are also being sought for a proposed new award. See page 4 for details.

I would like to thank those who contributed to this edition. Most content had been received by the due date and this made my job so much easier. Thanks must also go to Linda Bennison for her help and patience with my many questions on editorial protocol. The next issue of *Profile* will be in June and the deadline for copy is 15 May 2009. Details on the format for submissions are given in the box that follows.

## ASSSI and *Profile* Information



ASSSI was founded in 1955 to work towards the advancement of soil science in the professional academic and technical fields. It comprises a Federal Council and seven branches: Qld, NSW, Riverina, Vic, SA, Tasmania and WA. Liability of members is limited.

ABN: 96 080 783 106 Website: [www.asssi.asn.au](http://www.asssi.asn.au)

### ASSSI OBJECTIVES

- To promote the field of soil science
- To further the expertise in soil science of members
- To be a forum for discussion on soil science
- To increase government and community awareness of soil science
- To liaise and cooperate with other organisations in support of mutual interests
- To encourage research and extension in soil science
- To promote wise management of the soil resource throughout Australia

### MEMBERSHIP

For all membership and CPSS application and renewal enquiries go to

<http://www.asssi.asn.au>

and use the icons on the lower left of the screen or contact the ASSSI executive officer Linda Bennison at

[office@asssi.asn.au](mailto:office@asssi.asn.au)

phone 03 5622 0804 or fax 03 5622 0806.

### FEDERAL COUNCIL MINUTES

All minutes of ASSSI Federal Council meetings are available online to members at

<http://www.asssi.asn.au/MO/general/downloads.php>

### PROFILE CONTRIBUTIONS

Contributions to *Profile* are welcome. Email contributions to

[editor@asssi.asn.au](mailto:editor@asssi.asn.au)

Please provide content preferably as text within your email or as an attachment in RTF or PDF format.

Photos should be sent as separate attachments in JPG or other suitable format.

### PROFILE DEADLINES 2009

15 May, 14 August, 15 November.

### PROFILE ADVERTISING

Advertising in *Profile* is welcome and must be relevant to some aspect of soil science.

Rates are \$220 for a full page, \$110 a half page and \$55 a quarter page.

Information about conferences, courses and scholarships is published free.

## President's Column

Bushfires are a common natural phenomenon in the Australian landscape but the recent weeks in Victoria have been unprecedented with respect to the ferocity of the fire regime and the loss of human lives. What does this have to do with the Australian Society of Soil Science members? Soil scientists contribute to planning, managing erosion, catchment management and water quality, understanding the ecological and edaphological impacts of fire and in rehabilitating landscapes. So there is a role for us in delivering solutions to the problems that fire may bring. However, most immediately, there may have been impacts on the families and farms of our members and their friends.



Hillslope at Mudgegonga, NE Victoria  
21 February 2009

Photo by Neil Barr

The Federal Council executive and the Finance review committee considered drawing on the ASSSI funds to make a donation to the Red Cross appeal on behalf of the membership but at this time the resolution is to not do this. Although the bush fires have been extreme, so have the floods in Queensland and so was the 2004 Tsunami that killed so many people. The ASSSI is not a fund-raising charity. It has rules which define its operational structure and a strategic plan to provide context for its activities.

As individuals we can act in whatever way we choose but as an incorporated society we need to conform to statutes and processes that govern our actions. So, one of the more mundane effects of the bush fires has been to make some of us more critically aware of the ASSSI governance and also the tension that results from what we would choose to do as individuals and what we must do when acting as representatives of the ASSSI whether holding an office or not. As the membership of the ASSSI continues to grow (81 new membership applications so far this year) the accountability of the society grows in stature and the expectations and workload for the society's officers also increase.

The tasks for the Federal Council over the next period include the need to clarify aspects of the role of society officers, policies concerning use of ASSSI funds, and the processes that should govern ASSSI as a potential provider of services to Government. There have been some exciting discussions recently partly spurred on by the Andrew Campbell report and attracted by the potential to contribute to the Caring for our Country program. Clearly the importance of soil is becoming very apparent to politicians, land managers and the general public. As members of the ASSSI 'the peak body in Australia for professional soil scientists' we should make our collective presence and expertise conspicuous. Through Federal Council and the branches I will be seeking ways to do this. If you have any suggestions please send them to me or through Linda Bennison at our society office.

Richard MacEwan (February 2009)

## Awards: Nominations Sought

Nominations are sought for the

### PRESCOTT and PUBLICATION MEDALS and the CG STEPHENS PhD AWARD

Are you eligible or do you know of an eligible person for the Prescott or Publication Medals or the CG Stephens PhD Award? The closing date for applications is May 31st and details of these awards can be downloaded from the Society website at; <http://www.asssi.asn.au/general/awards.php> along with the application cover sheet.

The JA Prescott Medal of Soil Science is awarded to a person who has made an outstanding contribution to soil science.

The Australian Society of Soil Science Publication Medal is awarded for a publication on any subject in soil research for candidates 35 years or less. The award is made on the basis of scientific merit, relevance to soil science and effectiveness in communicating the paper's content to the reader. The award is normally for work carried out in Australia.

The CG Stephens PhD Award in Soil Science is awarded to the best PhD in Soil Science granted by an Australian University. The assessment of each PhD thesis will be based on the originality of the work, its significance to soil science and its clarity of writing.

Please send all nominations to the ASSSI Secretary, Dr Gemma Heemsker  
[gemmanichol79@hotmail.com](mailto:gemmanichol79@hotmail.com)  
with a cc to ASSSI federal office  
[office@asssi.asn.au](mailto:office@asssi.asn.au)

## Awards: Proposed New Award

Assistance is sought from members for a

### PROPOSED NEW AWARD

The Society is considering an award in recognition of outstanding effort in raising the awareness of soil science to the general public in Australia.

The current awards offered by the Society are named after JK Taylor, CG Stephens and JA Prescott all of whom are deceased. A suggestion has been made that the proposed award be named after a woman who has played an important role in raising awareness of soil science.

If any members have any suggestions for Federal Council to consider please forward the name to the federal office  
[office@asssi.asn.au](mailto:office@asssi.asn.au)

## 2010 Soil Art Calendar

Send in your photos for the

### 2010 ASSSI SOIL CALENDAR

We have been talking about it for years, and now the time has come.

ASSSI is going to produce its first soil calendar. It will appear towards the end of the year in readiness for 2010, and will feature ASSSI members' photos of soils. The aim of the calendar is to surprise and delight viewers about soils, so there will be strong emphasis on 'soil art' - images that could be taken for abstract art. Examples of soil art from past editions of *Profile* are shown on this page.

So, this is a call for all ASSSI members to email us photos for possible inclusion in the calendar.

#### Entry conditions

- Photos need to be digital, in landscape format and available in high resolution suitable for print reproduction.
- There is a limit of three entries per member.
- The calendar subcommittee of Richard Macewan, Linda Bennison and Rebecca Lines-Kelly will make the final selection of images for the calendar.

If your photo is selected, you will need to supply a CD of the high resolution file and a paragraph explaining the soil, its location and the date it was taken.

If you have a photo that you think would make a great calendar shot, email in the first instance a low resolution version to

[rebecca.lines-kelly@dpi.nsw.gov.au](mailto:rebecca.lines-kelly@dpi.nsw.gov.au)

by 30 June 2009.

Rebecca Lines-Kelly



MONTH 2010

Photo by Andrews Rate



MONTH 2010

Photo by Janet Wiild



MONTH 2010

Photo by Peter Koppitke

## New Members

The following new members, a record number and most from Queensland, are welcomed to ASSSI.

### New South Wales

Ben Asquith  
Melanie Bower  
David Harbison  
Matthew McSkimming  
Dave McKechnie  
Kris Saville  
Isa Yunusa

### Queensland

Niki Anderson  
Rhys Barlow  
Sam Bass  
Rodney Berndt  
Frances Bigge  
Michael Brackin  
Marcia Burger  
Michael Capper  
Mark Chilton  
Damian Clair  
Danny Coleborn  
Peter Cresswell  
Neil Cupples  
Cath de Voil  
Lyn Evans

### Queensland

David Follington  
Grant Fraser  
Ben Garnett  
Lily Gorrell  
Kate Goulding  
Ann Greisbach  
Kylie Hankins  
Greg Hansell  
Peter Harley  
Barry Hood  
Matthew Hughes  
Nathan Jannusch  
Daniel Joyce  
Cameron Kay  
Sarah Kill  
Clive Knowles-Jackson  
Peter Locke  
Cameron Mackay  
Kathryn Mahony  
Mark Markonda  
Bronwyn Masters  
Fiona McCartney  
Ken McCray

### Queensland

Ben McKenzie  
Brett McLennan  
Bill Medhurst  
Tamara Meehan  
Josh Mitchell  
Lynn Morrissey  
Tia Northfield  
Julie O'Halloran  
Scott Paten  
Greg Paynter  
Karyn Rains  
Shiri Raju  
Ken Rohde  
Eddie Row  
Bernard Schroeder  
Peter Sparshott  
Clare Staines  
Matt Staines  
Grant Stone  
Kieran Walters  
Bennett Warren  
Claire Whitehill  
Darren Wilson  
Courtney Windus

### Riverina

Ketema Zeleke

### South Australia

Sola Ajiboye  
Glenn McDonald  
Sarah Kivi  
Sarah Noack

### Victoria

Syed Hasnain  
Michael Heaven  
Juan Wang  
Elise Wenden

### Western Australia

Carly Weston  
Jodie Hawley  
Louise Barton  
Chris Gazey  
Ryan Milne

## New Member Profile

Dr Babasola Ajiboye (popularly known as Sola) started his career in soil science with a Bachelor of Agriculture (Honours) degree in Soil Science from the Obafemi Awolowo University, Nigeria in 2000. He obtained his MSc and PhD degrees in soil science, with specialty in Soil Chemistry and Chemodynamics, from the University of Manitoba, Canada. He also had postdoctoral training as an Industrial Scientist at the Canadian Light Source Inc. in Saskatoon, Canada.



Sola Ajiboye

Sola's previous soil science research projects include:

- Aggregate stability in organically-amended tropical soils;
- Chemical characterization of phosphorus in organic amendments;
- Retention characteristics and convective transport of P in manured and fertilized soil; and
- Application of X-ray absorption spectroscopy (XAS) and nuclear magnetic resonance (NMR) in characterizing phosphates in organic amendments and manure amended soils.

His research works have been extensively published in peer-reviewed journals and conference proceedings.

Sola joined the University of Adelaide/Mosaic Fertilizer Research Centre as a Research Fellow in June 2008 where he is assessing the availability and reactions of macro- and micronutrients fertilisers in soils.

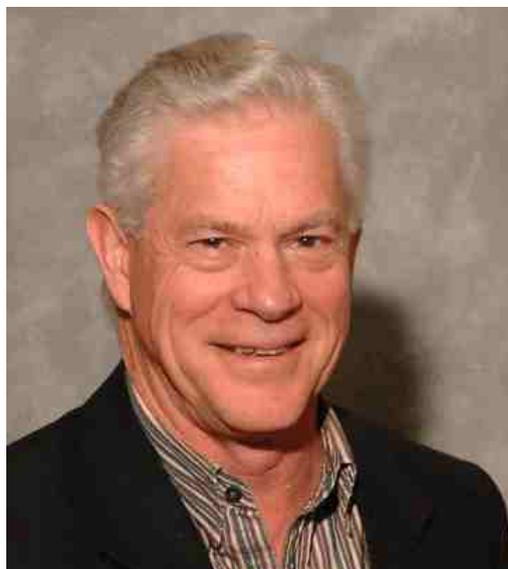
He is also a member of American Society of Agronomy, Crops Science Society of America, and Soil Society Science of America (ASA-CSA-SSSA) and Canadian Society of Soil Science (CSSS) and was a member-at-large for Manitoba Soil Science Society from 2006-07.

Sola looks forward to networking and collaborating opportunities with ASSSI members.

Welcome to ASSSI Sola.

## Appointment for Rick Morse

**Andrew Macleod sent in this piece about Rick Morse**



Rick Morse

Rick Morse has been an active member of the ASSSI for many years, and has worked tirelessly to promote soils and soil-related issues, particularly relating to erosion and sediment control on construction sites. In November 2008, Rick's contribution to soil and water management was acknowledged when he was appointed to the nine-member Board of Directors of the International Erosion Control Association (IECA), for a period of three years. Rick aims to bring a more international focus to the IECA, expanding its reach beyond North America and building greater networks of information and resource sharing so that the IECA can truly live up to its name and be an 'international' organisation.

Rick's desire is to see the momentum gained in awareness of erosion and sediment control continue to build and expand. Although Rick is retired, he continues to work part-time as a consultant to SEEC Morse McVey in addition to his work with the IECA. "I have sought to be a trailblazer--to bring the erosion and sediment control ethos to the forefront of awareness of our legislators, consent authorities, and land developers and their consultants..."

Congratulations to Rick on his appointment.

More information is available at  
<http://www.ieca.org/resources/mediacenter/default.asp>

Photo source  
[http://www.ieca.org/resources/documents/rick\\_morse\\_hires.jpg](http://www.ieca.org/resources/documents/rick_morse_hires.jpg)

Andrew Macleod  
Director SEEC  
Strategic Environmental and Engineering Consulting

## Vale Cliff Gurr

Mr Cliff G Gurr BSc died in Adelaide on 20 December 2008. This obituary was sent in by Cliff Hignett.

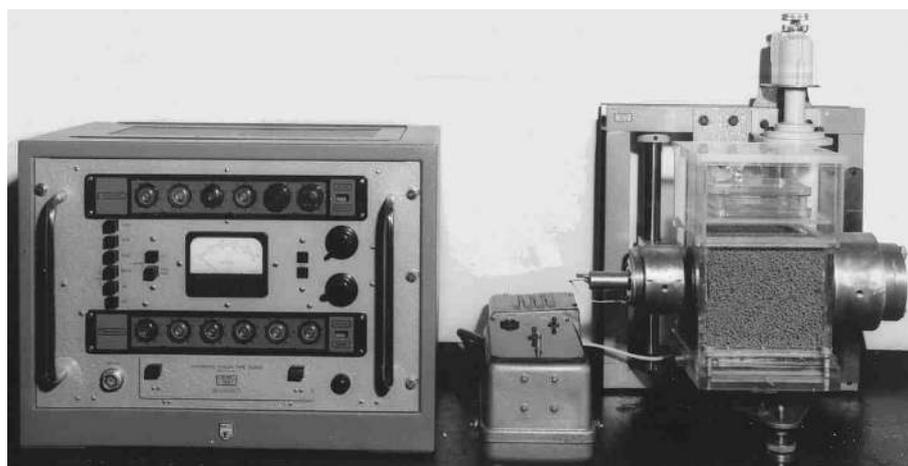
Cliff Gurr joined CSIRO Division of Soils in the 1940s and served with the original soil physics team (Marshall, Holmes, Greacen, Emerson) until his retirement in the 1980s.

He began service as a technical assistant helping to survey soils for airfield sites in Northern Australia during World War 2. He made many contributions to soil physics in the 1960s and 70s. His most substantial were a series of papers describing the use of gamma rays to measure density and water content of soils - the forerunner of gamma ray tomography. His own design Neutron Moisture meters predated most of the commercial models and were sufficiently superior that they were still in use in CSIRO into the 1990s.

As a young man, Cliff had a number of hobbies, not only a glider pilot with several long distance records to his credit, he also drove a sports car and, at one time, he held the speed record for the fastest time from the Fullarton Road gate to the front steps of the Waite Institute - later estimated at 180kph. In a subsequent attempt on this record, he hit a spoon drain and removed the sump of his car. Later calculation found that to achieve this, the tyres would need to be flat, the springs and shock absorbers fully compressed, and he would have still needed a further 5cm from flexing of the car frame.



Cliff Gurr with the second model gamma ray soil column scanner built c 1975. Cliff is adjusting the AIM65 computer system (a contemporary to the Tandy TRS-80) controlling it. In those days nothing came off the shelf - even the instrument rack (rear left) was a leftover from the Blue Streak rocket program at Woomera. The scanner and soil core are in the foreground



First soil column gamma ray scanner system built by Cliff Gurr c. 1965.

Cliff was one of those (now rare) scientists with substantial technical knowledge. He used his 'hobby' of electronics to assist projects ranging from the development of the neutron moisture meter to sensor and logger systems, and electronic gadgets to support laboratory and field experiments all over the country. I know there are still several of his AUGUGs (Another of Gurr's Unusual Gadgets) in service to this day.

At a time when there was virtually no specialist science electronics in Australia, Cliff used his fascination with electronics and wide interests in all sciences to make a very considerable contribution to soils research for over 40 years.

## Leeper Lecture Notes

In the December issue of *Profile* Jessie Horton reported on the 17th Professor GW Leeper Memorial Lecture. Dr Pichu Rengasamy has since provided an edited version of his 2008 lecture. Owing to the number of illustrations, this has been posted on the ASSSI website

<http://www.asssi.asn.au/>

## 2008 NZ Soils Conference

### THANK YOU from Sara Siebert

Thank you for attending the SOILS2008 Conference. I hope everyone enjoyed themselves. We certainly enjoyed meeting you.

The 2008 Organising Committee have asked me to remind delegates of a few things:

All extended abstracts (full papers) were provided to each delegate on the USB drive in your satchel. Only short abstracts were printed in hard copy (to save trees and the weight in your conference satchel)

Should you wish to obtain the mid-conference field trip notes from trips you did not attend, electronic versions may be downloaded from the SOILS2008 Conference Website. For more information visit

[www.soilsconference.co.nz](http://www.soilsconference.co.nz)

## 2008 NZ Soils Conference Reports

In return for receiving funding to attend the NZ Soils Conference, bursary recipients agreed to submit a report on the conference. Reports have been arriving at ASSSI. One report is included in this edition of *Profile*. Due to space restrictions in *Profile*, the reports will shortly be loaded onto the ASSSI website

<http://www.asssi.asn.au/>

### Report from Stephen Ives

2008 National Soils Conference, 1 - 5 December, Palmerston North, New Zealand  
Soil - The Living Skin of Planet Earth

#### *The Tour*

I was initiated into the world of soil scientists (at least New Zealand and Australia) with a pre-conference tour titled "Ashes to Issues" lead by David Lowe. About 24 of us gathered at a number of road cuttings and soil pits between Auckland and Lake Taupo in the North Island of New Zealand for three days, viewing, discussing and sampling the many soils developed during and since volcanic activity. 'Road cones' were erected at each road stop to ensure that the passing public were aware of the eminence bestowed upon students of the 'earth'. Geomorphology and pedology were discussed, along with environmental and social issues that soil scientists are increasingly becoming involved in. In Tasmania, the concern has been with planting trees on prime agricultural land, contrasting with New Zealand where trees are being removed to establish prime grazing land, providing evidence that nothing in this dynamic world is static. It appeared appropriate that the name of the subsequent conference be called "Soil - The Living Skin of Planet Earth".



Pre-conference Tour Group. We did look at soils - really.

Photo provided by Stephen Ives

### *The Conference*

Four PhD students and their entourage (Doctors Doyle and Cotching) arrived at Massey University, Palmerston North on Sunday afternoon for a meet and greet (wine and food) with the soils fraternity from New Zealand, Australia and many other parts of the world.

Monday morning after welcomes and introductions, the plenary lecture was delivered by Daniel Hillel, a world renowned soil scientist. I was introduced to this gentleman from reading one of his books as an undergraduate titled 'Out of the Earth - The rise and fall of civilisations', and was captivated by the simplistic explanations of complex situations. In person, I was not disappointed. The main point was that regardless of differing creation theories, soil remains the medium on which much of life depends. If we regard the soil as a species, it requires an increase in stewardship to maintain its survival.

Four hundred and eighty papers were presented over four and a half days covering areas such as soil policy development, soils in the ecosystem, soil formation, soil analysis techniques and soil health and quality. Non-specific soil issues regarding plants and water were also included, a point highlighted by one session chair who suggested that the study of soil into the future requires an holistic approach. Specific issues still require investigation, but from a wider context - much like a PhD. The 'Tassie' contingent presented well, with listening delegates being gracious in their response. I mainly followed the soil health and quality stream throughout the conference with a view to gathering information that may be relevant and perhaps adaptable to my specific PhD project titled 'The effects of reuse of industry and urban waste on Sodosols'.

### *The Future*

Attending conferences allows us to look back, look around and assess the potential direction in which to step. I believe this conference helped me to do that as well as providing me with an opportunity to network within a science context and in a social environment (tours and dinners).

Finally, I thank the Australian Society of Soil Science, Tasmanian branch for financial assistance to attend.

Stephen Ives, PhD Candidate

## Field Trip Report: NSW Branch

### Ben MacDonald reports on the NSW Branch Field Trip to the ACT

On 6-7 February, twenty brave souls ventured to Canberra for a field trip to the Lower Cotter Catchment and the Yass Valley. On both days the mercury reached about 40 degrees Celsius and at both locations there was not much in the way of shade. To ensure an all-over tan the final stop was at a dry land salinity site.

On the Friday we headed out to the Lower Cotter Catchment which is located in the Brindabella Mountains west of Canberra. The catchment was severely affected by the 2003 fires which burnt in total 250 000 ha around Canberra. The exposure of soil after the fires left it vulnerable to erosion and a major problem for water quality management. Stephen Algeria (TAMS) and Dr Malcolm Gill (The Fenner School, ANU) discussed the fires and impact on the catchment and the community. Norm Mueller (ACTEW) and Jessica Drake (The Fenner School, ANU) discussed how erosion was managed in the catchment. The group visited various and very impressive erosion control structures and closed roads that were being regenerated.



Dr Malcolm Gill describes the approach of the 2003 firestorm at Mt McDonald. This was area was a former pine plantation. Photo taken by Ben Macdonald

The day ended with a swim in the lower Cotter River and rehydration at a local Canberra restaurant.



Dr Richard Greene and the Gundaroo Profile which contains three aeolian dust deposits. Photo taken by Ben Macdonald

The next day Dr Richard Greene and Dr John Field (The Fenner School, ANU) led our intrepid troop off to the Yass River Valley to examine the role of aeolian dust deposition on soil pedogenesis. Some of the sites have been used by Pat Walker and Colin Chartres who concluded substantial amounts of aeolian dust was present in the soils. Present studies by Scott, Chen and Gatehouse who have integrated soil science, geomorphology and regolith science have shown that there are at least three episodes of aeolian deposition which is similar to that in the Wagga Wagga area. The day was finished at a dryland salinity site that had become severely eroded due to the exposure of a sodic B horizon.

Many thanks to all involved and, despite the heat, it was a great field trip.

## Excursion in the Northern Territory

### Brian Lynch reports on soil sampling in the Northern Territory



Land resource officers from Darwin and Alice Springs set about describing one of the soil pits. Photo by Jason Hill

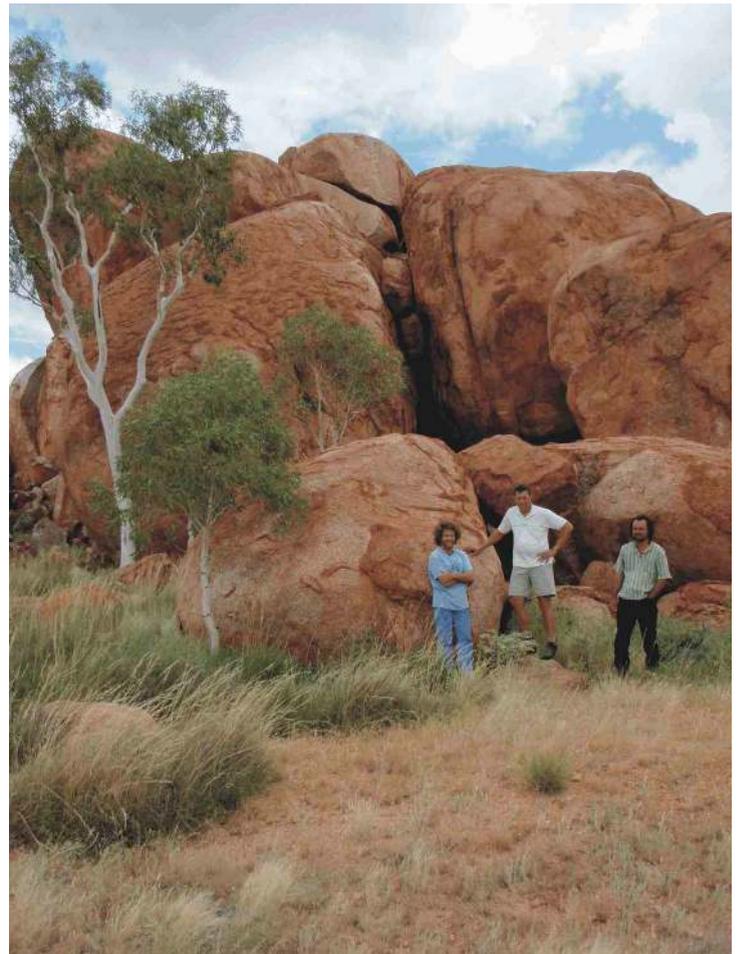
The wet season is not the ideal time for describing and sampling soils in the Top End. In mid February, four land resource staff from NRETAS took the opportunity to swap the mildew and mozzies for some serious dust and flies with a soil pit trip to the arid zone.

The opportunity to collect some much sort after soil profile data from the arid zone was largely provided by Chris Materne (RDPIFR Pastoral Production) who required some information on seven field sites. The trip also allowed for some field time with new staff in the Alice Springs office.

After some notable rainfall events in December there was hope that there would be sufficient soil moisture to assist with the ease of digging the pits and extracting samples for bulk densities. This was not the case and there was some discussion between Top End and Arid Zone staff on what constituted notable rainfall events. Nevertheless, the seven pits were dug, described and sampled according to schedule and a greater appreciation was gained for the vast arid landscapes.

All who participated are now very familiar with Calcarosols. The Top Enders were also treated to soil structure and some spectacular displays of fine earth effervescence, requiring a restock of 1 molar HCl.

After nine days on the road house diet, two shredded tyres and over 5 500 km, the trip was a valuable opportunity to further the collective knowledge base of some of the arid zone soils and landscapes.



Brian Lynch, Bart Edmeades and Chris Mangion take time out to appreciate some of the impressive surface coarse fragments of the Napperby land system. Photo by Jason Hill

## Soil Chemistry Workshop: QLD

### **Peter Kopittke reports on the Understanding Soils Workshops: An Introduction to the Theory, Measurement and Interpretation of Soil Chemical Properties.**

*Reprinted (with permission) from the Queensland Branch March 2009 Newsletter*

On Monday 16 February 2009 at The University of Queensland, St Lucia and Thursday 26 February 2009 at the Department of Natural Resources and Water, Toowoomba, the Queensland Branch of ASSSI ran a training day on soil chemistry, entitled “An Introduction to the Theory, Measurement and Interpretation of Soil Chemical Properties”. The workshop was open to landholders, state and local government officers, consultants, regional bodies, developers, community groups and other people interested in learning more about soils. Between the two locations, we had a total of 93 people attend. Clearly, people want to learn about soil chemistry.



Andrew Biggs giving an introduction to soil in Toowoomba (Department of Natural Resources and Water) Photo copied from Queensland Branch Newsletter March 2009

The first part of the day consisted of PowerPoint presentations covering a range of topics, including soil pH, the theory of soil chemical fertility (both inorganic and organic), salinity and sodicity, soil fertility assessment, and behaviour of inorganic and organic contaminants in soils. In the afternoon, we rotated through a series of four hands-on activities demonstrating some of the ideas discussed in the presentations.

The workshops were highly successful, with very positive feedback from the participants. Some of the comments received included; the course was a “good integration of theory with practical”, there was a “good balance between lab work and lectures”, the topics discussed were “interesting and practical”, “the course was good value”, “altogether a well-balanced workshop”, and “no improvements needed”.

Although a wide variety of people attended the workshop, many were from environmental consultancies and from State/Local Government. Through the workshop, a total of 54 people became new members of ASSSI – an outstanding result indeed!

A big “thank you” to the presenters and assistants who made this course possible, including (but not limited to) Kristie Watling (NRW), Andrew Biggs (NRW), Angus McElnea (NRW), Neal Menzies (UQ), Gillian Kopittke (OTEK Australia), Pax Blamey (UQ), Kim Marchiori (Harmony Gold Pty Ltd), Geoff Lambert (UQ), and Neil Cupples (NRW).

## CPSS Chairman's Report



David McKenzie

The current economic downturn is adversely affecting some of our members, particularly those associated with irrigated agriculture in the lower Murray Darling Basin. At the same time, however, soil management is being regarded by many commentators as a key part of the solution to national and global challenges such as climate change, food security, and limitations imposed by the upcoming shortages of farm inputs derived from oil and gas ("Peak Oil"). The challenge for the CPSS Board is to find a way to make the most of these opportunities as soon as possible through effective planning and lobbying to promote the CPSS scheme and the accreditation of soil science professionals.

ASSSI President Richard MacEwan and I made contact with an adviser to Mr Tony Burke, Federal Minister for Agriculture, last December and informed her about the expertise available via ASSSI and CPSS.

Richard, Linda Bennison and I met in Bendigo in January to talk about funding opportunities for CPSS through new federal programs, and to build upon the ASSSI response to 'National Committee on Soil and Terrain' about the Andrew Campbell report. Discussions are continuing.

A major priority for the CPSS Board in 2009 is to promote the CPSS scheme to as many influential people as possible within governments, particularly those responsible for legislation associated with soil assessment and management across Australia.

There are many aspects of commercial soil science that would benefit from stronger legislation at all levels of government. For example, both our clients and CPSS members would do much better if governments could stipulate that all new irrigation developments and re-developments require the best available land management inputs via soil scientists with CPSS accreditation. A CPSS promotional brochure has been developed for distribution to members, government agencies and other stakeholders. We will mail it to everyone on our list of key contacts.

The next Board meeting is on 24 March 2009. I hope that all CPSS members can be contacted soon afterwards and be asked for their opinions about our plans for the next 12 months. We are keen to make the most of the talents that exist within our group, and to make the CPSS scheme as attractive as possible to potential new members.

David McKenzie CPSS-3

## CPSS Comment

### **Why I decided to rejoin the CPSS scheme by Professor Emeritus Robert White CPSS-3**

At its general meeting in Melbourne in July 1996, the Australian Society of Soil Science Inc. (ASSSI) accepted my recommendation that we establish an accreditation scheme for professional soil scientists, creating categories of Certified Professional Soil Scientists (CPSS). The matter had been discussed in the Society for several years previously, and it required several years subsequently, with the tireless efforts of successive Presidents and Councils, for the scheme to develop a satisfactory structure and a rigorous auditing procedure. Because there were reservations that the Society could not develop and

support such a scheme on its own, CPSS was originally set up under the aegis of the then Australian Institute of Agricultural Science (AIAS). However, because that organization was unable to honour all its commitments under the scheme of arrangement, ASSSI gradually took over full responsibility for the competency standards and maintenance of the register of CPSS, and acquired the rights to the intellectual capital originally invested in the scheme by the AIAS.

In the past few years, the CPSS scheme has grown greatly in stature and influence, especially among those members of the Society working in private industry. While initially slow to be recognized in government departments, it is now engaging many more members from such agencies. In recent years, the CPSS Board, members of which serve in an honorary capacity, has done an excellent job in administering the scheme, with the very able assistance of the ASSSI Executive Officer. Nevertheless, now that the CPSS scheme is approaching a 'critical mass' there is much that ASSSI members can do to promote the scheme to employers of soil scientists and others in related disciplines who may or may not be current Society members, but who have a concern for soils and their management. For example, the topic of sequestering carbon in soil is on the radar of both major political parties in the context of the climate change debate; soil and the quality of runoff into streams and dams are very much an issue of concern in the aftermath of widespread bush fires, as is the multifaceted relationship between soil management and water yields in parched catchments of the Murray-Darling Basin.

When I retired from the University of Melbourne at the end of 2003, for reasons of ill health I cut back on several of my commitments, one of which was involvement with the CPSS scheme. However, subsequent to that time I have been involved in various consulting activities and have come to realize that having the CPSS imprimatur would be of benefit to me in these pursuits, as well as helping to confirm my strong belief in the value of the accreditation program. Thus, earlier this year I applied to rejoin the CPSS scheme and, on submission of my CV and an up-to-date professional diary, I am pleased to say I have been accepted back into the fold. Perhaps there are others in a similar position who could consider the option of joining or rejoining

Robert E White CPSS-3  
Professor Emeritus, the University of Melbourne

## CPSS Register



### CPSS REGISTER AND MAP BEING ACCESSED BY THE PUBLIC

Positive feedback has been received from accredited Certified Professional Soil Scientists (CPSS) who have been contacted by councils and consulting firms using the CPSS Register.

If you need to locate a CPSS with specific expertise or if you are looking for a CPSS in a specific area you can use the CPSS Register.

The CPSS Register is on the home page of the Australian Society of Soil Science Inc. web site.

CPSSs are reminded to keep their entries updated using the ASSSI website.

ASSSI members wishing to apply for accreditation can access the application forms from the Society web site via the CPSS downloads page Members Only section.

## Soil Care Workshop



Lyn Abbott with members of SoilCare

Photo by Justine Cox

SoilCare is a Landcare affiliated association of farmers, educators and passionate people in northern NSW. Professor Lyn Abbott from The University of Western Australia was running a workshop for growers called "Soils are Alive". The workshop, held at Wollongbar, covered soil carbon, decomposition, nutrient cycling, soil organisms. A practical session to identify some of the different organisms living in soil was also included. Professor Abbott.

## Branch Reports

### QUEENSLAND Branch Report

#### Meetings

The Queensland Branch has not held an OGM since the last Federal Council meeting in Palmerston North, NZ. The next OGM is scheduled for Thursday 19 March 2009 and will be the Annual Student Night, with the guest speaker being Professor Leigh Sullivan from Southern Cross University (NSW).

#### Other Activities

Over the Christmas break, the Queensland Branch devoted most of its efforts to organising a training day on soil chemistry ("An Introduction to the Theory, Measurement and Interpretation of Soil Chemical Properties"). The workshop was run in two locations, in Brisbane on Monday 16 February 2009 and in Toowoomba on Thursday 26 February 2009. The first part of the day consisted of PowerPoint presentations (covering: soil pH, the theory of soil chemical fertility (both inorganic and organic), salinity and sodicity, soil fertility assessment, and behaviour of inorganic and organic contaminants in soils) followed by a series of hands-on activities in the afternoon demonstrating some of the ideas discussed in the presentations. The workshops were open to landholders, state and local government officers, consultants, regional bodies, developers, community groups and other people interested in learning more about soils. Between the two locations we had 90 to 100 people attend.

The workshops have been highly successful, raising around \$7,000 profit for the Queensland Branch plus capturing about 60 new members for the Society (which, in turn generates about \$7,000 profit this year alone for Federal). However, more importantly, people enjoyed the course and gained a new appreciation for soil. The two largest 'groups' of people attending were from environmental consultancies and from State and Local Government (particularly the Queensland Department of Main Roads – perhaps the only government department with money left?). The course generally rated well,

with participants completing a feedback form and scoring the workshop an average of 4.2 out of 5.0 (Brisbane results only at this stage).

### **2008 Undergraduate and Postgraduate Student Awards**

In December the undergraduate student awards were presented to:

- Kieren Walters (University of Southern Queensland)
- Peter Harley (James Cook University)

A panel of ASSSI members granted the Graduate Award for Excellence in Soil Science to Dr Cara Beal (The University of Queensland) for her PhD thesis *The hydrology of septic absorption systems: investigation and prediction of hydraulic failure*.

### **VICTORIA Branch Report: Prepared by Mark Imhof**

#### **Recent Activities**

*Leeper Lecture* (21 November 2008)

The ASSSI Victorian Branch and University of Melbourne School of Land and Environment jointly hosted the 17th Professor GW Leeper Memorial Lecture on Friday 21 November 2008. An estimated 100 people attended this major event on the Victorian Branch annual calendar. Dr Pichu Rengasamy ('Renga') presented an excellent lecture on *Innovative Strategies to Tackle Multiple Soil Constraints to Agricultural Productivity* that explored soil constraints such as sodicity, salinity, acidity, nutrient deficiency and toxicity in cropping soils. John Martin as Introductory Speaker provided a short presentation related to Professor Leeper titled *Leeper and Northcote* that explored some of the interactions between these two influential soil scientists, especially centred on the discipline of pedology. A special presentation was made to two new Victorian Honorary Life Members Jim Rowan and Professor Bob White. They were awarded special certificates and a short presentation was made covering their extensive careers in soil science. Drinks and nibbles after the lecture were generously provided by the School of Land and Environment. The annual Leeper lecture dinner followed and was attended by 25 people.

*Leeper Lecture Excursion* (27 November 2008)

The annual Leeper Lecture excursion was held on the Saturday following the lecture, and on a wet and windy morning about 20 bold soil scientists boarded a bus bound for the Bacchus Marsh district. A 'companion notes' booklet was prepared for participants that included information relevant to each stop.

#### **Soils 2008 Conference, Palmerston North NZ**

The Victorian Branch had excellent participation at the Soils 2008 Conference in Palmerston North (NZ) in December. Branch sponsored student (Debra Turner) attended and will submit a report.

#### **Proposed Activities**

*Leeper Lecture 2009* (27 November 2009)

Dr Rob Fitzpatrick will present a lecture, tentatively titled *Soil Science – Solving Problems* that will look at 'pedotechnology' and the role of soil science in forensics.

*Leeper Lecture Excursion* (28th November 2009) to tentatively look at Acid Sulfate Soil issues in the Port Phillip/Westernport region. Soils and viticulture seminar and possible field trip (with wine tasting activity) are tentatively planned for late May/early June 2009 to coincide with publication of Professor Bob White's new book on 'Understanding Vineyard Soils'.

#### **Current Issues: World Congress 2010 Tour Proposal Development**

WCSS Post-Conference Tour SA-Vic (August 2010) Stage 2 development progressing fairly well (SA-Richard Merry, Melissa Fraser, Rob Fitzpatrick) (Vic – Mark Imhof, David Rees, Damien Adcock, Jess Horton, Nicole Mathers, Bob White). WCSS Pre-Conference Tour (Vic-NSW-ACT) still needs more commitment.

## SOUTH AUSTRALIA: Branch Report, Student Presentations and 2008 AGM

On 27 November 2008, the SA Branch held its final event for the year with student presentations and the AGM. Over 20 people turned out at the Waite Campus to hear the recipients of the 2008 travel bursaries present their prepared orals for the Soils 2008 Conference in Palmerston North, New Zealand.

Travel awards were granted to Ashlea Doolette, Seth Laurenson, Sjaan Davey, Mohsen Forouzangohar, Binoy Sarkar and Ehsan Tavakkoli. Their presentations were informative, interesting and of a very high standard, congratulations all.



SA Branch President Mel Fraser with Vice President Seth Laurenson  
Photo provided by Mel Fraser

The AGM followed with new office bearers elected. The 2009 committee consists of Melissa Fraser - President, Seth Laurenson - Vice President, Ashlea Doolette - Secretary, Ehsan Tavakkoli - Treasurer, Danni Oliver, Richard Merry, Mark Thomas, Jock Churchman, Jen De Livera, John Hutson, Narges Milani, Binoy Sarkar, and Paul Shand. Outgoing committee members included Nanthi Bolan and our hard working Treasurer and Secretary, Thérèse McBeath, much thanks go to both for their dedication and hard work on the committee.

### Soils 2008 Conference, Palmerston North, New Zealand

In addition to the six students awarded travel bursaries, many other South Aussies made their way to NZ, including Jock Churchman, Ann McNeil, Melissa Fraser, Mr & Mrs Hignett, Thérèse McBeath, Sean Mason, Ron Smernik and our old friend Clayton Butterly. Nine oral presentations were given by SA members, an impressive effort indeed. Well done to all!



SA branch members at the Soils 2008 Conference dinner Photo provided by Mel Fraser

### Upcoming Events

The new SA Branch committee met in late January to schedule activities for the year ahead. The success of the informal seminar series' held in 2007 and 2008 will see them held again in 2009. Our first event for the year will be held at the University of South Australia, Mawson Lakes Campus, with a theme of 'Contaminated Soils' on Tuesday March 24. Our invited speakers include Associate Research Professor Enzo Lombi, University of South Australia and Shane McDonald, Malcolm Pirnie, King of Prussia, Pennsylvania.

Other seminars are tentatively scheduled for June 24 at the Waite Campus and August 19, Flinders University. The Annual Lecture is penned in for September 21 at this stage, with Professor Emeritus Bob White as our guest speaker. The Annual Field trip will be held on the following day, as in previous years.

## Media Releases

### **\$32 million program to research soil carbon storage by online parliamentary correspondent Emma Rodgers**

[http://www.maff.gov.au/media/media\\_releases/2009/march/\\$32\\_million\\_for\\_research\\_into\\_australias\\_soil\\_carbon\\_and\\_emissions](http://www.maff.gov.au/media/media_releases/2009/march/$32_million_for_research_into_australias_soil_carbon_and_emissions)

Posted by DAFF09/208B on 3 March 2009

Nine research programs across the country will begin looking at effective ways to store carbon in soil in a bid to reduce emissions.

Announced by Federal Agriculture Minister Tony Burke today, a further nine programs will also monitor nitrous oxide emissions of various farming systems, at a total cost of \$32 million.

Mr Burke told the ABARE 2009 Outlook Conference that the potential benefits of storing carbon in soil were great but more scientific work had to be done before it could be included in an emissions trading scheme.

"We need consistent methods of measurement and we need to understand the effects of different farming systems and land use practices on the permanence of soil carbon," he said.

"The Government's new soil carbon research program aims to help close these gaps in the science."

The soil programs, costing \$20 million, will aim to measure the levels of carbon in the soil across a variety of farming systems involving sheep and cattle, grain crops, cotton, vegetables and dairy.

The CSIRO will oversee the management of all programs and analyse the potential for soils to remove carbon dioxide from the atmosphere.

The nitrous oxide research programs, costing \$12 million, will look at the emissions from sugar cane, cotton, dairy pastures, and cereal crops.

"The critical aim of all these research initiatives is fundamental to our response to climate change - reducing emissions while boosting productivity in agriculture," Mr Burke said.

"We need to continue to push the edges of research in all of these areas."

The Federal Government has excluded agriculture from its emissions trading scheme until at least 2015 and will make a final decision about its future inclusion in 2013.

### **Films from Rebecca Lines-Kelly**

A documentary on soil is one of the feature selections at the 2009 Sundance film festival. Please select the web site below for more information.

<http://dirtthemovie.org>

Also later in the year and inspired by William Bryant Logan's acclaimed book, "Dirt, The Ecstatic Skin of the Earth", Dirt! The Movie, is a witty yet poignant look at man's relationship with Dirt.

<http://www.imdb.com/title/tt1243971/>

## World Soil Map

The following links about a new digital soil map of the world suggest that two ASSSI members, Neil McKenzie (CSIRO Land & Water) and Alex McBratney (The University of Sydney) will be busy over the next few years.

The official site for a press release and brochure on the story (March 2009)

[www.globalsoilmap.net](http://www.globalsoilmap.net)

*A new digital soil map of the world*

ABC Rural Bush Telegraph (24 March 2009)

*Getting the global dirt on soil* (by Michael Mackenzie)

<http://www.abc.net.au/rural/telegraph/content/2009/s2524627.htm>

ABC Rural News (16 March 2009)

*New soil map will help the world's farmers*

<http://www.abc.net.au/rural/news/content/200903/s2516948.htm>

The University of Sydney Media Office (13 March 2009)

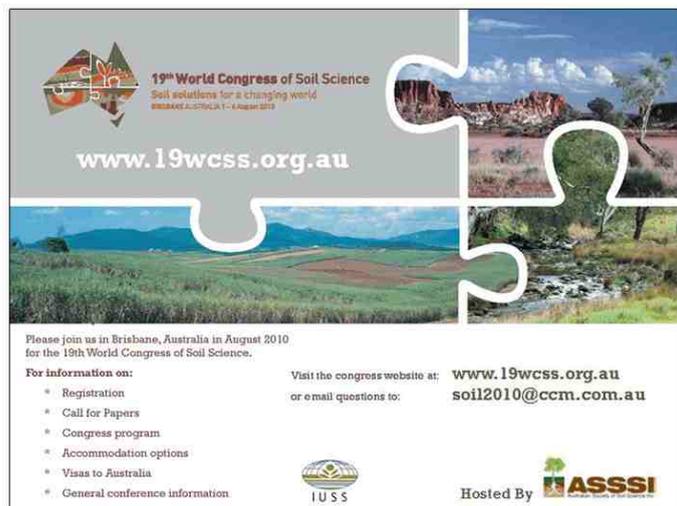
*Soil scientists to create global soil map*

<http://www.usyd.edu.au/news/84.html?newsstoryid=3140>

## WCSS 2010: Postcards

Members of the 2010 World Congress of Soil Science Organizing Committee are asking for help in promoting the World Congress of Soil Science in Brisbane. If you are attending a conference could you please include either of these two promotional postcards at the end of your presentation. The postcards are PowerPoint slides available for download from the ASSSI website:

<http://www.asssi.asn.au/>



## Events

European Geosciences Union 2009

19-24 April 2009, Vienna

<http://meetings.copernicus.org/egu2009>

12th Annual Environmental Conference

10-13th May 2009, Noosa

<http://ere2009.pbwiki.com/>

ANZ Geomorphology Group Inc

7-12 July 2009, Melbourne

[www.geomorphology2009.com](http://www.geomorphology2009.com)

XVI International Plant Nutrition Colloquium  
"Plant Nutrition for Sustainable Development  
and Global Health"

26-30 August 2009, Sacramento, California

*See advertisement on this page.*

2nd International Biohydrology Conference

21-24 September 2009, Slovakia

<http://www.ih.savba.sk/>

5th International Workshop on Chemical

Bioavailability

24-25 September 2009, Adelaide

<http://www.cleanupconference.com/>

3rd International Contaminated Site Remediation  
Conference

27-30 September 2009, Adelaide

<http://www.cleanupconference.com/>

Molecular Environmental Soil Science

10-14 October 2009, China

<http://zjklsp.zju.edu.cn/ISMESS/index.htm>

4th Asia-Pacific Conference on Unsaturated  
Soils

23-25 November 2009, Newcastle

<http://livesite.newcastle.edu.au/sites/cgmm/UNSAT2009>

19th World Congress of Soil Science

1-6 August 2010, Brisbane

<http://www.19wcss.org.au>

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## Australian Journal of Soil Research

Volume 47 Number 1 2009

### **Nutrient Management by the Australian Grains Industry**

To access abstracts go to:

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Preface: Nutrient management by the Australian grains industry

*P. C. Price*

Key crop nutrient management issues in the Western Australia grains industry: a review

*W. Chen, R. W. Bell, R. F. Brennan, J. W. Bowden, A. Dobermann, Z. Rengel and W. Porter*

The effectiveness of deep placement of fertilisers is determined by crop species and edaphic conditions in Mediterranean-type environments: a review

*Qifu Ma, Zed Rengel and Terry Rose*

Tillage system affects phosphorus form and depth distribution in three contrasting Victorian soils

*D. T. Vu, C. Tang and R. D. Armstrong*

Effects of tillage practices on soil and water phosphorus and nitrogen fractions in a Chromosol at Rutherglen in Victoria, Australia

*Nicole J. Mathers and David M. Nash*

Fate of potassium fertilisers applied to clay soils under rainfed grain cropping in south-east Queensland, Australia

*M. J. Bell, P. W. Moody, G. R. Harch, B. Compton and P. S. Want*

Identifying fertiliser management strategies to maximise nitrogen and phosphorus acquisition by wheat in two contrasting soils from Victoria, Australia

*V. M. Dunbabin, R. D. Armstrong, S. J. Officer and R. M. Norton*

Wheat roots proliferate in response to nitrogen and phosphorus fertilisers in Sodosol and Vertosol soils of south-eastern Australia

*S. J. Officer, V. M. Dunbabin, R. D. Armstrong, R. M. Norton and G. A. Kearney*

Plant availability of phosphorus from fluid fertiliser is maintained under soil moisture deficit in non-calcareous soils of south-eastern Australia

*S. J. Officer, R. D. Armstrong and R. M. Norton*

Quantifying the benefits of accounting for yield potential in spatially and seasonally responsive nutrient management in a Mediterranean climate

*Y. M. Oliver and M. J. Robertson*

Positive charge discovered across Western Australian wheatbelt soils challenges key soil and nitrogen management assumptions

*M. T. F. Wong and K. WittwerInsert*

## Australian Journal of Soil Research

Volume 47(2) 2009

### Contents

To access abstracts go to:

<http://www.publish.csiro.au/?nid=85&issue=5029>

Effect of season and landscape position on the aluminium geochemistry of tropical acid sulfate soil leachate

*W. S. Hicks, G. M. Bowman and R. W. Fitzpatrick*

Evidence for biocycling from Ba/Ca, Sr/Ca, and  $87\text{Sr}/86\text{Sr}$  in soils (Red Brown Earths) from South Australia

*Erick A. Bestland and Matthew S. Forbes*

Heavy metal distribution, bioaccessibility, and phytoavailability in long-term contaminated soils from Lake Macquarie, Australia

*Kwon-Rae Kim, Gary Owens and Ravi Naidu*

Distribution of carbon, nitrogen, phosphorus, and sulfur in the soil in a multiple habitat system in India

*B. Anjan Kumar Prusty, Rachna Chandra and P. A. Azeez*

Effect of cotton–cowpea intercropping on C and N mineralisation patterns of residue mixtures and soil

*L. Rusinamhodzi, H. K. Murwira and J. Nyamangara*

Soil respiration and  $\text{N}_2\text{O}$  emission in croplands under different ploughing practices: a case study in south-east China

*Shutao Chen and Yao Huang*

Statistical patterns of carbonates and total organic carbon on soils of *Tuber rufum* and *T. melanosporum* (black truffle) brûlés

*L. G. García-Montero, I. Valverde-Asenjo, P. Díaz and C. Pascual*

Organic acid mediated nutrient extraction efficiency in three calcareous soils

*Z. Khademi, D. L. Jones, M. J. Malakouti, F. Asadi and M. Ardebili*

Management practices for control of runoff losses from cotton furrows under storm rainfall. III. Cover and wheel traffic effects on nutrients (N and P) in runoff from a black Vertosol

*D. M. Silburn and H. M. Hunter*

Soil indicators and their use by farmers in the Billabong Catchment, southern New South Wales

*B. Kelly, C. Allan and B. P. Wilson*