



Hi All,

Highly recommended reading is the *Journal of Wildland Fire* special edition on Predictating post wildfire runoff and erosion Response.

Regards

Brian

## **Warming could release the carbon locked away in tundra soils**

[Yereth Rosen](#) Alaska Dispatch News

23 February 2016



Scientists measuring tundra carbon output at a site near Healy have found that microbes in the active layer of tundra soil become more active in warmer winter temperatures and release more carbon -- turning the tundra from a carbon sink into a carbon source.  
Courtesy Elizabeth Webb

Year after year, the tundra covering the landscape of the far north has pulled carbon dioxide out of the atmosphere. Tiny plants absorb it during the intense summers, when they bloom in round-the-clock sunlight. The rest of the year, frozen soils lock that carbon dioxide away.

But that may be about to change.

If current warming trends continue, even cold tundra soil will soon release more carbon in the winter than tundra plants remove in summer, changing the vast northern landscape from a carbon sink into a producer of atmospheric carbon dioxide, new field research from Interior Alaska shows. <http://www.adn.com/article/20160223/warming-could-release-carbon-locked-away-tundra-soils>

## **Seven Projects Protecting Soils Around the World**



Soil projects are working around the globe for awareness of sustainable soil management and the reversal of soil degradation.

The International Year of Soils came to a close on 4 December but that won't be the end of the work for many soil projects. According to United Nations Secretary-General Ban Ki-moon, "soils are the foundation of food systems" and "are critical to achieving food security and nutrition." Without governance and investment in measures to promote sustainable soil practices, further soil degradation could have enormous implications. <http://foodtank.com/news/2016/02/seven-soil-projects-working-around-the-world>

## Large dust storms in the south west

<b>Dust activity</b>	Dust storm in south western NSW
<b>Wind strength</b>	Same as last month; average for the month of
<b>Groundcover</b>	Decreasing across southern Australia
<b>Rainfall</b>	Good falls in eastern Australia
<b>Land management</b>	Winter crop paddock preparation commenced





Fantastic image of the dust storm by Mick Smith. Read all the details in the latest [DustWatch Report](#).

<http://www.environment.nsw.gov.au/resources/dustwatch/160187DWNL.pdf>

## **Healing the soil**

Repurposing abandoned urban lots starts with soil test

### **Summary:**

Chicago's history of industrialization and urbanization left its mark on the soil. Soil acts as a sponge, and can host contaminants for years. In Chicago, the waste from industrial manufacturing causes undesirable toxic organic chemicals, heavy metals, and other chemicals to linger in the soil. A non-profit youth development center hopes to repurpose the lots into useful spaces for the community. However, the poor quality soils in the lots create challenges.

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Students from DePaul University Ellen Webb (left) and Yarency Rodriguez (right) collect soil from empty lots on Chicago's South Side to gauge the health of the soil and better inform the next steps for the lots.

*Credit: Photo credit James Montgomery.*

Four empty lots in Chicago's South Side bear scars of the past. Their surfaces are strewn with construction debris and foundation rubble. However, the most incriminating evidence of the past lies beneath the surface, in the soil.

Chicago's history of industrialization and urbanization left its mark on the soil. Soil acts as a sponge, and can host contaminants for years. In Chicago, the waste from industrial manufacturing causes undesirable toxic organic chemicals, heavy metals, and other chemicals to linger in the soil. This can pose problems for the health of the humans and plants that inhabit the land years later.

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#### **Journal Reference:**

1. James A. Montgomery, Christie A. Klimas, Joseph Arcus, Christian DeKnock, Kathryn Rico, Yarency Rodriguez, Katherine Vollrath, Ellen Webb, Allison Williams. **Soil Quality Assessment Is a Necessary First Step for Designing Urban Green Infrastructure.** *Journal of Environment Quality*, 2016; 45 (1): 18 DOI: [10.2134/jeq2015.04.0192](https://doi.org/10.2134/jeq2015.04.0192)

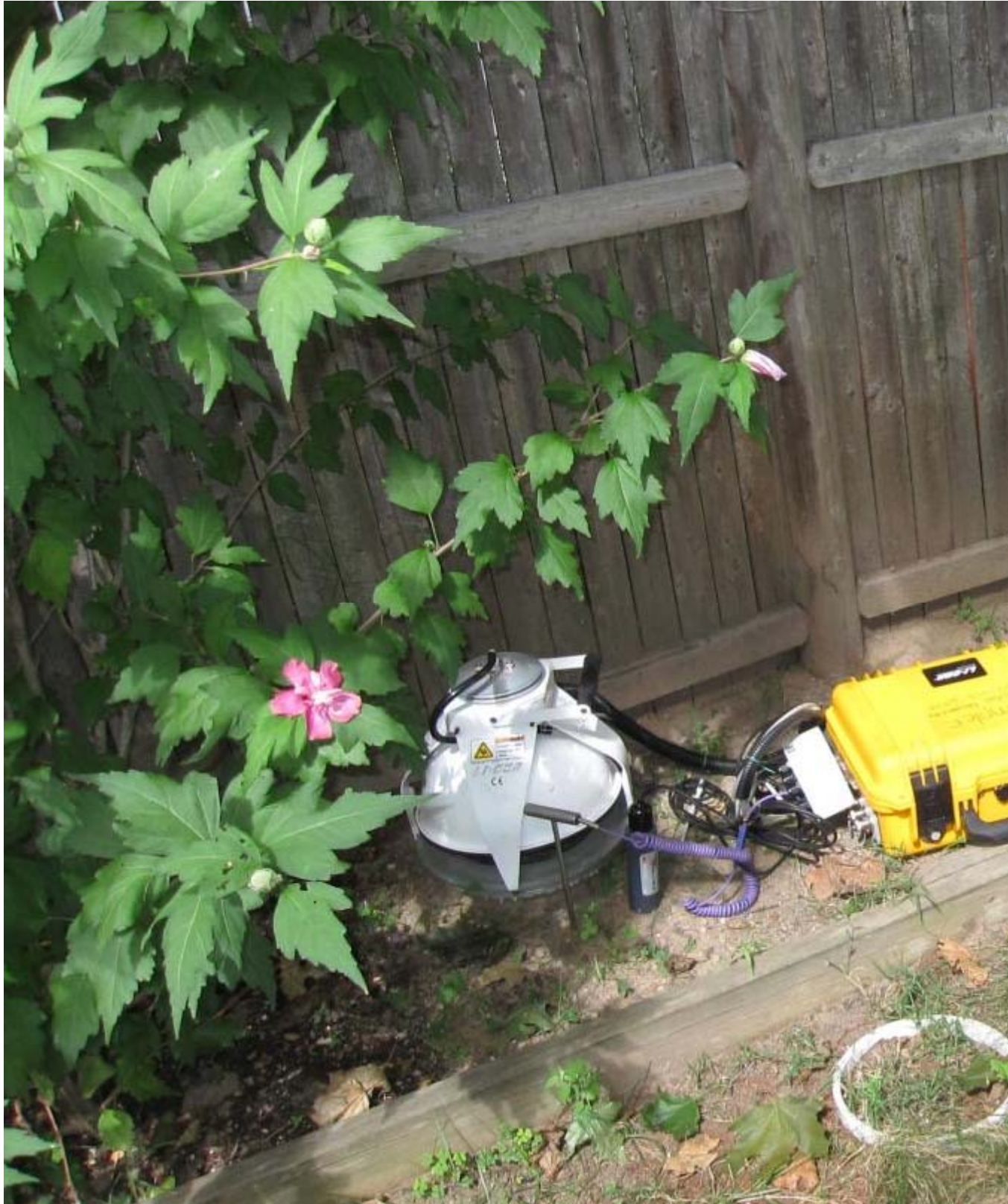
<http://www.sciencedaily.com/releases/2016/02/160210135336.htm>

## **Urban soils release surprising amounts of carbon dioxide**



Tracking biological emissions will allow more accurate assessments of climate action programs

BOSTON UNIVERSITY



**IMAGE:** Stephen Decina, Boston University PhD student, measures carbon dioxide being released from the soil using an automated soil carbon dioxide efflux system. The equipment, which is controlled with a smartphone,... [view more](#)

Credit: Stephen Decina

(Boston) – 23 Feb. 2016 - In the concrete jungle at the core of a city, carbon dioxide (CO<sub>2</sub>) emissions are dominated by the fossil fuels burned by the dense concentrations of cars and buildings. Boston University researchers now have shown, however, that in metropolitan areas surrounding the city core, plant roots and decomposing organic material in soil give off enough CO<sub>2</sub>, in a process termed "soil respiration", to make an unexpectedly great contribution to total emissions.

[http://www.eurekalert.org/pub\\_releases/2016-02/bu-usr022316.php](http://www.eurekalert.org/pub_releases/2016-02/bu-usr022316.php)

## Orbital snaps reveal Roebuck Bay's tidal movements

1 March 2016 by Geoff Vivian, Sciencenetwork Wa



This photo of Roebuck Bay was taken from the International Space Station on June 11, 2015 using a Nikon D4 digital camera using an 1150 millimeter lens. Credit: Image courtesy of the Earth Science and Remote Sensing Unit, NASA Johnson Space Center

A photo of Roebuck Bay just south of Broome, snapped by a curious astronaut on the International Space Station, has called into question the origin of some of the region's highly-unusual parallel tidal creeks.

Read more at: <http://phys.org/news/2016-03-orbital-snaps-reveal-roebuck-bay.html#iCp>

## Learn to manage your sodic soils

**Got sodic soils on your farm? Here are three options for managing those areas**

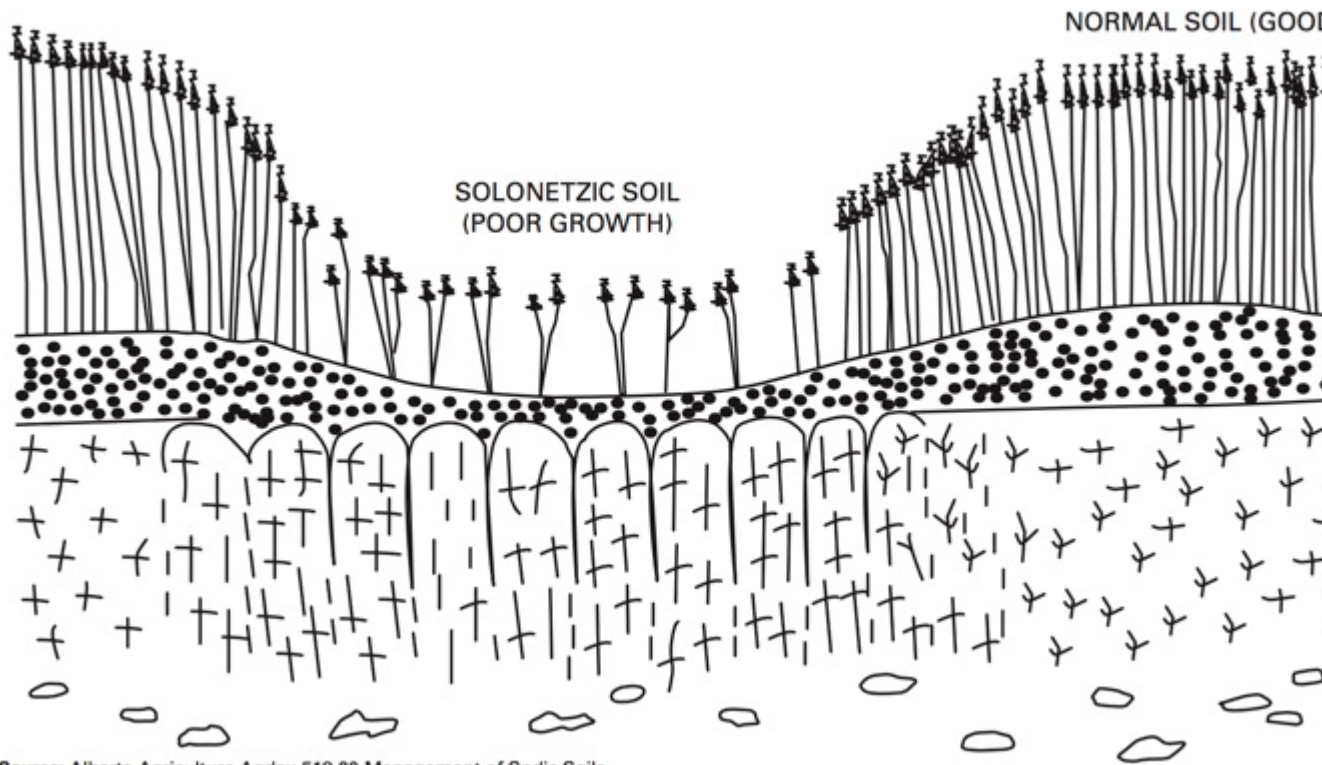


By [Ross McKenzie](#)

*Columnist*

Published: 29 February 2016





Source: Alberta Agriculture Agdex 518-20 Management of Sodic Soils

This Solonetzic soil has a columnar-structured B horizon, which restricts water and root penetration into sub-soil. *Photo: Alberta Agriculture and Forestry*

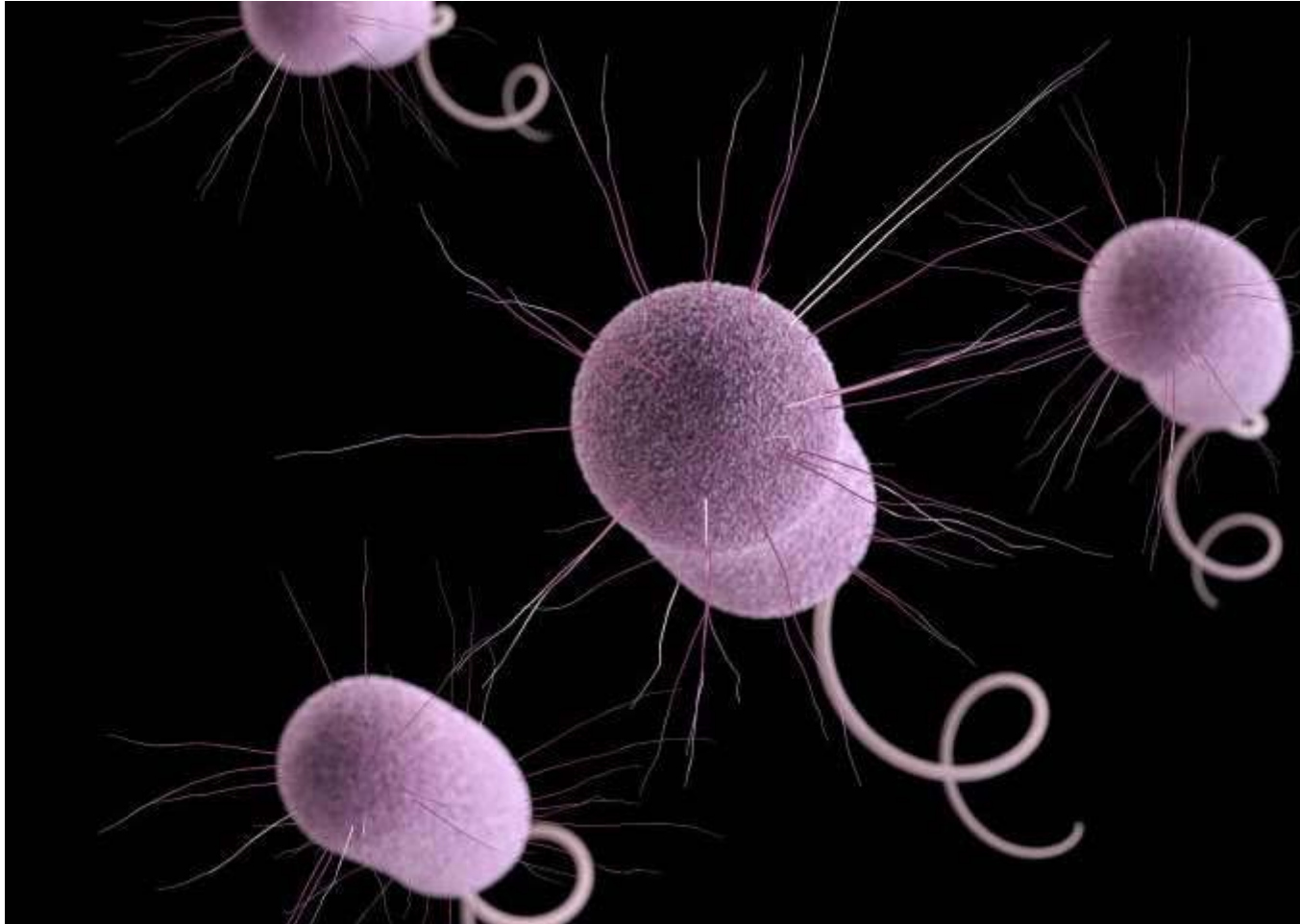
In the last issue of *Grainews* I discussed the physical and chemical characteristics of sodic soils. In this issue, I'll discuss managing those soils.

Solonetzic soils in the brown or dark brown soil zones of southern Alberta or southern Saskatchewan, that are in native grassland may be best left in their native condition and used for carefully managed livestock grazing. For more information about improving or reclaiming Solonetzic soil, refer to Alberta Agriculture Agdex 518-8 Management of Solonetzic Soils available at Alberta Agriculture's website.

<http://www.grainews.ca/2016/02/29/learn-to-manage-your-sodic-soils/>

## Seventy generations of bacteria

3 March 2016 by Diana Lutz



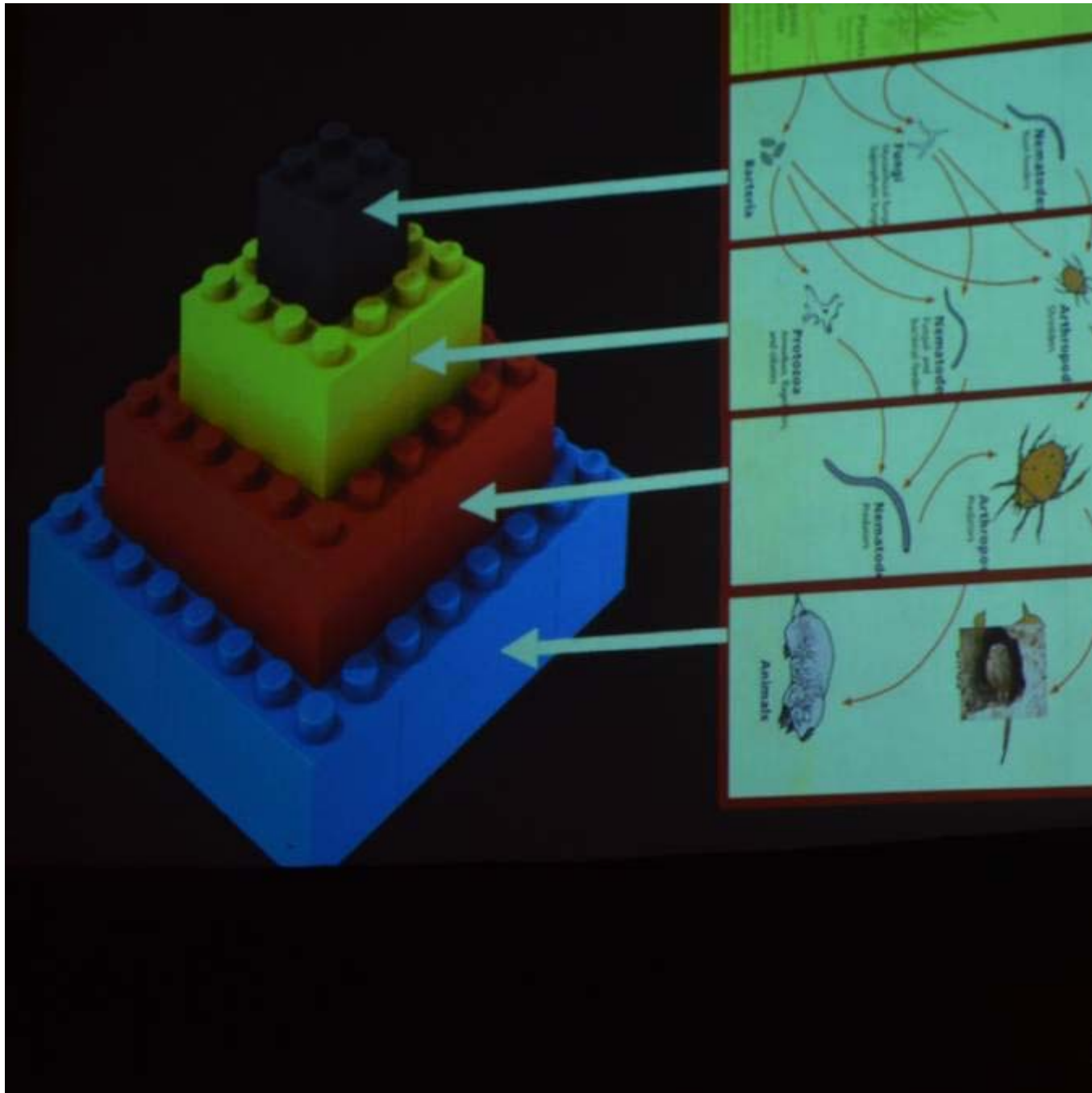
The model organism *Pseudomonas aeruginosa* is famous for multidrug resistance, but compounds called bacteriocins may be able to outflank it. Credit: Courtesy of Centers for Disease Control and Prevention

When the first antibiotics became available 70 years ago, they were often described as miracles of human ingenuity, rather like plastics or bright permanent dyes, which were discovered at roughly the same time. Packaged in vials or pills, they seemed like our inventions rather a chance gift of evolution and one that evolution might also rescind.

Read more at: <http://phys.org/news/2016-03-seventy-bacteria.html#jCp>

## **Improve soils with diverse microbes mix**

By ALISHA FOGDEN  
25 Feb. 2016, 9 a.m.



Wendy Taheri addresses the SANTFA conference.

WITH MOST arable country in the world already farmed, better nutrient use efficiency is needed in agriculture to ensure we can feed the nine billion population expected, according to United States microbiologist Wendy Taheri.

<http://www.barossaerald.com.au/story/3750783/improve-soils-with-coverage-microbial-mix/>

## Keep soils in balance for producing higher corn yields: Part II

22 Feb 2016 [Forrest Laws](#) | Delta Farm Press





David Hula says he's not against grid sampling for trying to enhance corn yields, but that such sampling only provides a snapshot of your soils.

The Charles City, Va., grower says he prefers using a yield monitor to determine how much nutrient is being removed from the soil and tissue sampling to determine if corn plants are getting what they need. <http://deltafarmpress.com/corn/keep-soils-balance-producing-higher-corn-yields-part-ii>

## What can be done about badly depleted nitrogen levels in Africa's soil

Thursday, 25 February 2016 4:51 AM UTC

African soils have been mined for their nutrients for far too long. Nutrients are removed in harvesting across the continent, but they aren't being returned to the soil. This usually happens in the form of manures or fertilisers. As with a bank so too with soil: if you don't deposit as much as you withdraw you'll be left impoverished.

Nitrogen is a vital nutrient for healthy soils and healthy people. To feed its growing population in 2050, Sub-Saharan Africa will need to at least [double its nitrogen inputs](#). Where will this nitrogen come from?

### Nitrogen: the good and the bad

Nitrogen can be added to the soil via synthetic fertiliser, manure

<http://www.econotimes.com/What-can-be-done-about-badly-depleted-nitrogen-levels-in-Africas-soil-167404>

## No-till conquers heavy soils



## **Jason Cavadini**

Jane Fyksen/Agri-View

Jason Cavadini began utilizing no-till at the Marshfield Agricultural Research Station.

23 February 2016 1:00 am • By [Jane Fyksen](#)

Jason Cavadini first started working at the University of Wisconsin's Marshfield Agricultural Research Station station in spring 2013. Now an assistant superintendent, he was told at the time that no-till wouldn't work with the station's heavy, poorly drained soils. He still wanted to try.

"Here in Central Wisconsin, a big concern is, 'What do we do with the water?'" Cavadini said. "How do we get it to drain better? If through no-till we can allow the soil (to better drain), in our opinion that's the best way."

[http://www.agriview.com/briefs/crop/no-till-conquers-heavy-soils/article\\_10777114-9bc3-55af-b6f6-a06ba17650cd.html](http://www.agriview.com/briefs/crop/no-till-conquers-heavy-soils/article_10777114-9bc3-55af-b6f6-a06ba17650cd.html)

# Predicting Post-wildfire Runoff and Erosion Response - Special Issue of International Journal of Wildland Fire

International Journal of  
**WILDLAND FIRE**

International Association  
of Wildland Fire



Source: International Journal of Wildland Fire, Volume 25(3) 2016

Author/s: Guest edited by Richard Shakesby, John Moody, Deborah Martin and Peter Robichaud

*This special issue of the journal examines issues around predicting post-wildfire runoff and subsequent erosion response. The following **eight** articles presented in this issue are selected from those presented at a 2013 conference concerned with post-wildfire hydrogeomorphic impacts*

Read more: <http://www.publish.csiro.au/nid/115/issue/7983.htm>

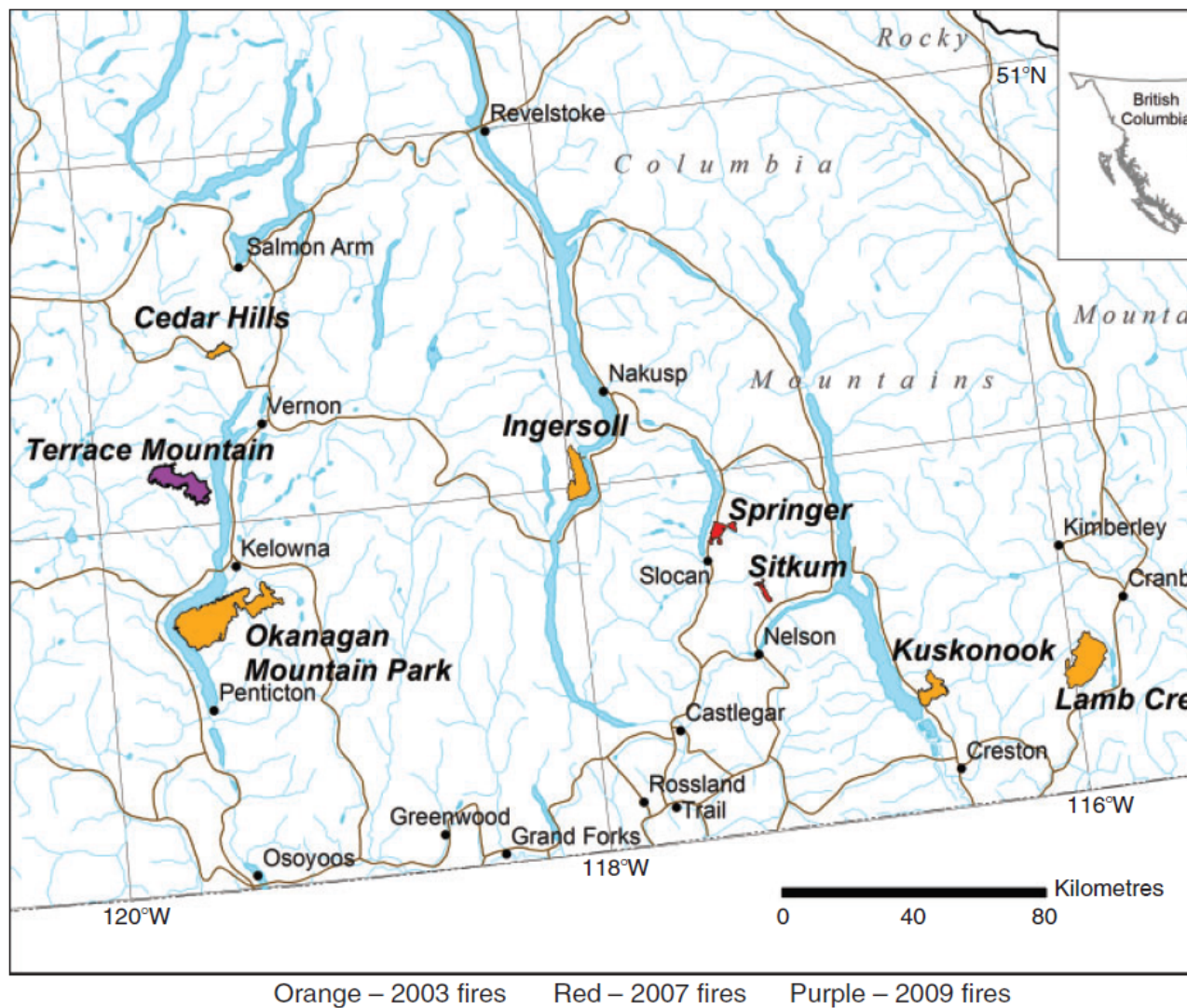


# Post-wildfire debris flows in southern British Columbia, Canada

Peter Jordan

British Columbia Ministry of Forests, Lands and Natural Resource Operations, 401–333 Victoria Street, Nelson, BC V1 L 4K3, Canada. Email: [peter.jordan@gov.bc.ca](mailto:peter.jordan@gov.bc.ca)

*International Journal of Wildland Fire* 25(3) 322-336 <http://dx.doi.org/10.1071/WF14070>



**Fig. 1.** Location of fires in south-eastern British Columbia in which post-wildfire landslides and flood events occurred.

Several post-wildfire debris flows and other landslides occurred after the extreme wildfire season of 2003 in the south-eastern interior of British Columbia. Such events had not been previously reported in Canada, although they are common in similar latitudes. Severe wildfire seasons also were experienced in 2007 and 2009, and additional events were observed in 2009. Post-wildfire landslides have occurred in spring, summer and fall (autumn); events have been triggered by spring snowmelt.

high-intensity summer rainstorms and low-intensity fall rainstorms. Of a total of 36 documented events, 23 were debris flows and the most common initiating mechanism was high peak flow in channels. Most sediment in these events was deposited in the channels, not from erosion in burned areas. Seven of the events were infiltration-triggered debris slides, and six were debris floods. A variety of hydrologic changes can contribute to the prevalence of post-wildfire landslides and debris flows, including an increase in snowmelt rate. High-severity burn in catchment headwaters above steep channels is a topographic factor favouring debris flow occurrence. These observations demonstrate that the likelihood of debris flows and other mass movement events in susceptible terrain is significantly increased following severe wildfire in this snow-dominated environment.

<http://www.publish.csiro.au/nid/114/paper/WF14070.htm>

## **CSIRO becoming a 'glorified consultancy', as climate adaptation program at risk**

26 February 2016



Labor senator Kim Carr says some CSIRO answers to Senate estimated 'defied belief'. *Photo: Alex Ellinghausen*

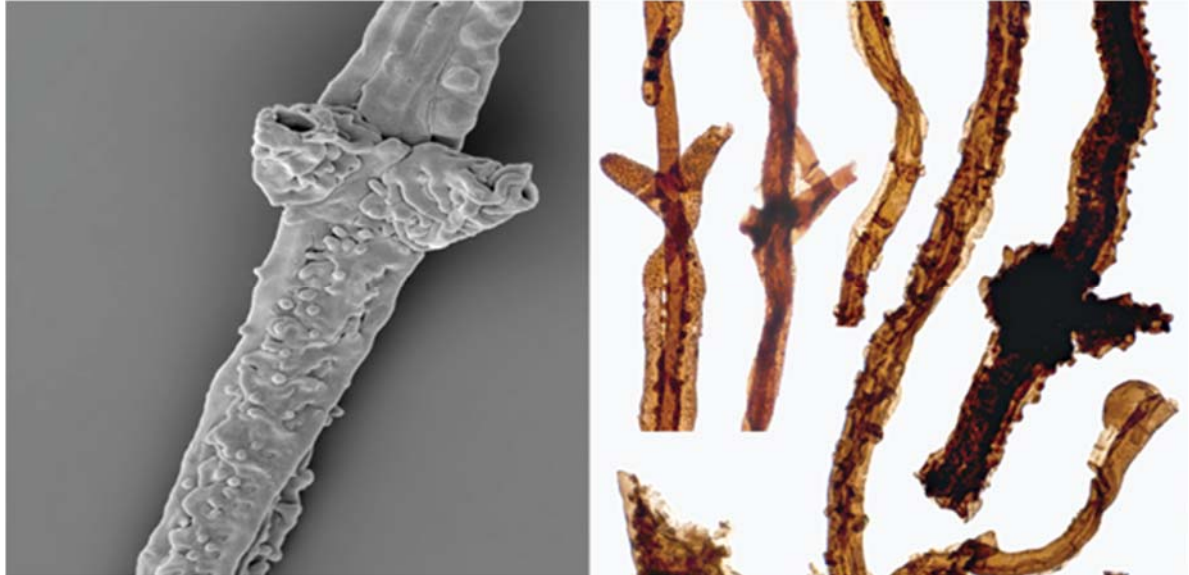
The drive to increase the share of CSIRO funding from external sources is turning Australia's premier scientific research institution into "a glorified consultancy", Labor's shadow industry minister Kim Carr said.

Senator Carr said the current round of job cuts, which will fall particularly hard on the CSIRO's climate change programs, revealed a distortion of the organisation's mandated role.

Read more: <http://www.smh.com.au/environment/climate-change/csiro-becoming-a-glorified-consultancy-as-climate-adaptation-program-at-risk-20160225-gn4863.html#ixzz42BOPZXYI>

# Fossil of oldest known land-dweller identified

2 March 2016



Filaments of Tortotubus. Credit: Martin R. Smith

The earliest example of an organism living on land – an early type of fungus – has been identified. The organism, from 440 million years ago, likely kick-started the process of rot and soil formation, which encouraged the later growth and diversification of life on land.

Read more at: <http://phys.org/news/2016-03-fossil-oldest-land-dweller.html#jCp>

## Christchurch earthquake: 'Severe' magnitude 5.7 earthquake hits New Zealand city

Updated 14 Feb 2016, 6:50pm Sun 14 Feb 2016, 6:50pm

[Related Story: Deadliest earthquakes of the past 30 years](#)

[Map: New Zealand](#)

A "severe" magnitude 5.7 earthquake has hit the New Zealand city of Christchurch almost five years after a deadly tremor devastated the region.

### Key points:

- No immediate reports of structural damage to buildings: emergency services
- Tremor caused objects to fall off shelves, at least one building evacuated: media reports
- Earthquake too small to cause a tsunami: GeoNet spokeswoman

GeoNet Science, the official New Zealand earthquake monitoring service, warned of aftershocks following the "severe intensity" quake.

There have been more than 40 aftershocks, GeoNet reported.



<http://www.abc.net.au/news/2016-02-14/magnitude-5.8-earthquake-hits-christchurch/7166604>

## Green groups pull out of biodiversity reform process

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Main New South Wales Green groups pull out of biodiversity reform process

1. 02.21 / 06:19 [www.dailyexaminer.com.au](http://www.dailyexaminer.com.au) [show description](#)[hide description](#)



Peak conservation groups withdrawing from top-level stakeholder...

THE Baird Government's biodiversity law reform agenda has suffered a major setback with the state's peak conservation groups withdrawing from top-level stakeholder consultations.

The groups have walked away from talks with the Office of Environment and Heritage, which is drafting the new laws, and are now seeking direct talks with the ministers for environment, planning and primary industries.

"We have provided detailed analysis and constructive feedback to help develop a conservation law that addresses the increasing threats to wildlife, soils and climate but it is now clear that the government is on a course to pursue development at high environmental cost," the groups said in a joint statement. <http://myinforms.com/en-au/a/24927386-green-groups-pull-out-of-biodiversity-reform-process/>

## Tilling and soil wetters benefit local crops

2 March 2016 by Tony Malkovic, Sciencenetwork Wa



“At West Midlands, the strategic tillage approach gave superb results—wheat establishment improved by 60 per cent and yield by 85 per cent an increase of 1.5 tonnes per hectare, compared with the unploughed treatments,” he said. Credit: United Soybean Board

Tilling paddocks and using soil wetters can dramatically increase the yield of wheat and barley crops growing in the water-repellent gravel soils found across much of WA's farmlands.

Read more at: <http://phys.org/news/2016-03-tilling-soil-wetters-benefit-local.html#iCp>

## **Green groups blame National Party 'radicals' for breakdown in land clearing talks**

19 February 2016



Total Environment Centre director Jeff Angel says talks have been hijacked by 'radicals' in the Nationals  
*Photo: Tamara Dean*

The state's peak environment groups have pulled out of discussions over proposed land clearing and biodiversity laws, declaring the process has been hijacked by "radicals" in the National Party.

The NSW government is planning to overhaul biodiversity and land clearing laws introduced by Labor that have been long opposed by farming groups and the Nationals.

Read more: <http://www.smh.com.au/nsw/green-groups-blame-national-party-radicals-for-breakdown-in-land-clearing-talks-20160218-gmy5sp.html#ixzz42BQB4dxd>

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## Aboriginal burning 'had little impact' on erosion rates in Australia's Southern Tablelands

Source: ABC Science, 4<sup>th</sup> February 2016

Author/s: Stuart Gary

"Key points:

- *Aboriginal use of fire to clear landscape had little effect on soil erosion in the NSW Southern Tablelands.*
- *Soil erosion rates have stayed at about 8.7 millimetres per 1,000 years for millions of years.*
- *The practice of burning only occurred over the past 1,000 to 3,000 years in the area. The use of fire by Aborigines to modify their environment had little, if any, impact on the natural erosion processes that shaped parts of south-eastern Australia, a new study has found.*

*The effect of fire use by Aboriginal Australians on the landscape has been widely debated, said the study's lead author Dr Eric Portenga of the University of Glasgow and Macquarie University. "The discussion had been that humans arrived in Australia 50,000 years ago and very quickly altered the environment through the use of fire," he said. "But this new research tells us burning was not used as long as people had thought or as*



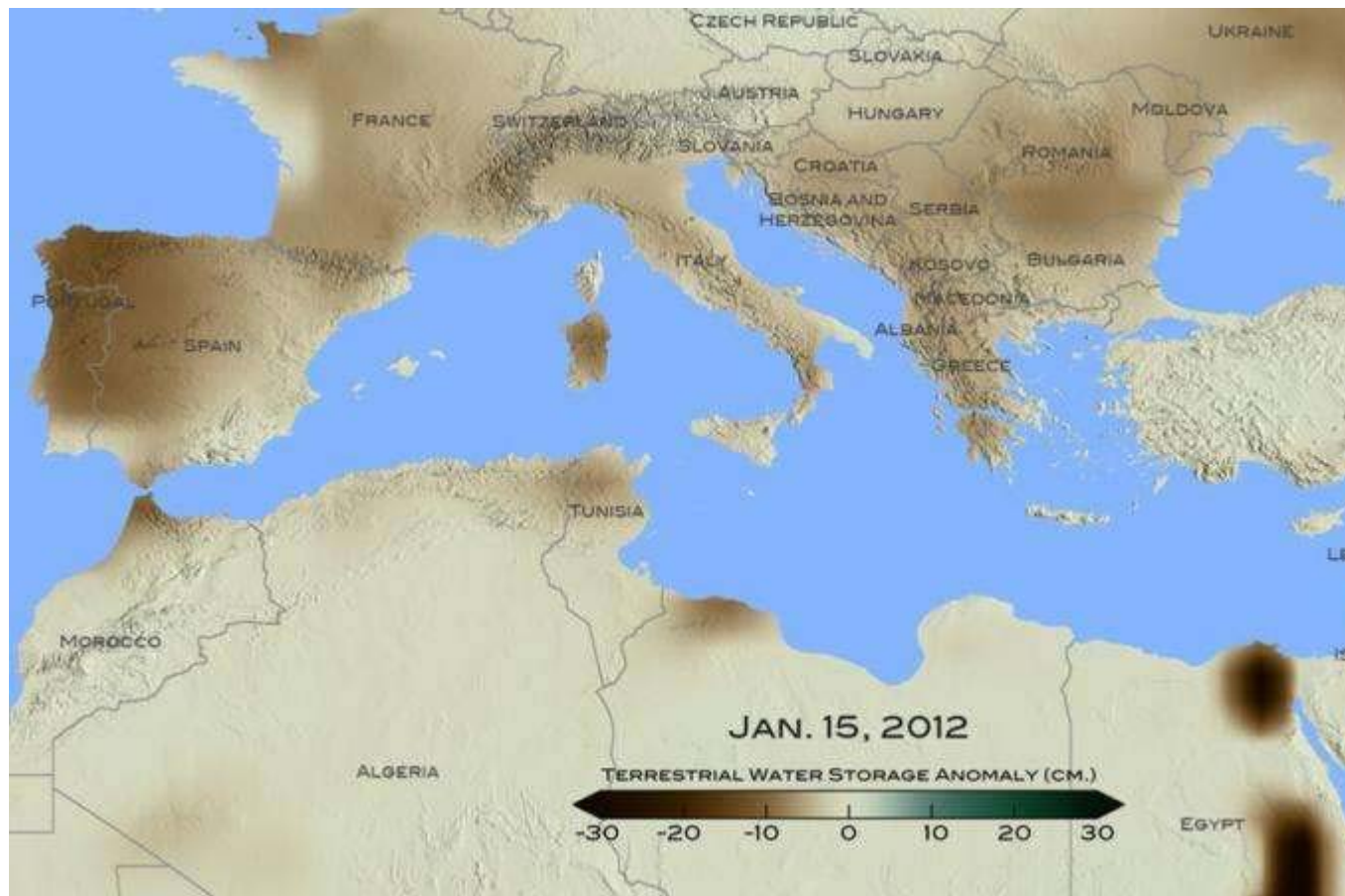
*intensely as people had previously believed."*

Read more: <http://www.abc.net.au/news/2016-02-04/aboriginal-land--clearence-bush-fire-environment/7107980>

And <http://geology.gsapubs.org/content/44/2/131.abstract>

# NASA finds drought in Eastern Mediterranean worst of past 900 years

1 March 2016



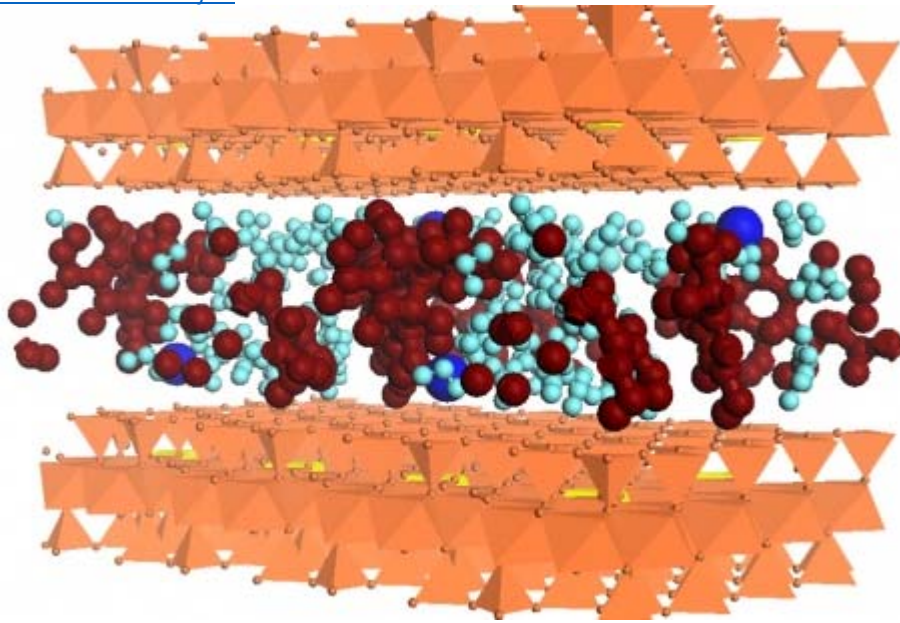
For January 2012, brown shades show the decrease in water storage from the 2002-2015 average in the Mediterranean region. Units in centimeters. The data is from the Gravity Recovery and Climate Experiment, or GRACE, satellites, a joint ...[more](#)  
A new NASA study finds that the recent drought that began in 1998 in the eastern Mediterranean Levant region, which comprises Cyprus, Israel, Jordan, Lebanon, Palestine, Syria, and Turkey, is likely the worst drought of the past nine centuries.

Read more at: <http://phys.org/news/2016-03-nasa-drought-eastern-mediterranean-worst.html#jCp>

## Study: Antibiotics hide within soil mineral layers

By

[Krishna Ramanujan](#)



Ludmilla Aristilde

Simulation of clay nanopores containing trapped tetracycline antibiotic compounds: water molecules (light blue), metals (dark blue), antibiotics (dark red), clay layer (orange), negative charges in clay structure (yellow).

A Cornell study revealed the molecular mechanism of how antibiotics from human and farm animal waste become trapped in soils, findings with the potential to explain the behavior and consequences of antibiotics in the environment.

The new study, published 15 Feb. in the *Journal of Colloid and Interface Science*, reveals how metals that are abundant in natural soils change the arrangement of clay minerals, causing the mineral layers to come apart and create nanoscale

<http://www.news.cornell.edu/stories/2016/02/study-antibiotics-hide-within-soil-mineral-layers>

## **Trees vital to improving stream quality, study finds**

2 March 2016 by Sandi Martin



Rhett Jackson, left, and Nik Heynen, right, professors at the University of Georgia, check stream quality in the Upper Little Tennessee River Basin in the Southern Appalachians.

Want better streams? Plant some trees, according to a University of Georgia study.

Researchers from UGA's Warnell School of Forestry and Natural Resources found that where landowners cut down the forests that bordered [streams](#)—turning them into pastures or lawns—the structure and even the amount of aquatic habitat changes dramatically

Read more at: <http://phys.org/news/2016-03-trees-vital-stream-quality.html#jCp>

## **Invasive Species Focus Of Soils, Crops Conference**

[Invasive Species Focus Of Soils, Crops Conference](#)

The University of Missouri Extension's 86th annual Soils and Crops Conference will be Tuesday, February 23, at the VFW Hall on Veterans Drive in Ste. Genevieve.

Doors open to the public at 5 p.m.

Century Farm and Cooperator of the Year will be awarded at 5:30 p.m.



Jan Dellamano, Missouri Department of Conservation private lands conservationist, will speak about identification and control of invasive weed species.

Those attending the conference will enjoy a dinner sponsored by area businesses and prepared by the Ste. Genevieve VFW Hall.

RSVP to the University of Missouri Extension at 573-883-3548 or [stegenevievec@missouri.edu](mailto:stegenevievec@missouri.edu) by Friday, February 19, to ensure a meal.

*(Information in a news release from the University of Missouri Extension in Ste. Genevieve.)*

[http://www.stegenherald.com/community/invasive-species-focus-of-soils-crops-conference/article\\_33fc0274-d4e8-11e5-8d3d-b74816a9441d.html](http://www.stegenherald.com/community/invasive-species-focus-of-soils-crops-conference/article_33fc0274-d4e8-11e5-8d3d-b74816a9441d.html)

## Is conservation aid preventing deforestation?

1 March 2016



This is an aerial view showing the border area of W National Park in Benin, Africa. Deforestation outside of the park is visible, with relatively better conditions within the park. Forest clearing is beginning to encroach on the park. Credit: Daniel Miller  
With over \$3.4 billion spent in international conservation funding to protect biodiversity and stop tropical deforestation in Africa since the early 1990s, it makes sense to ask if the funding

is effective. A recent study finds that conservation aid alone has not been able to counteract deforestation pressures, and in some cases may have even exacerbated forest loss.

Read more at: <http://phys.org/news/2016-03-aid-deforestation.html#jCp>

## M6.4 - 24km SSE of Yujing, Taiwan

<span class="utc">2016-02-05 19:57:27 (UTC)</span> <span class="location"> 22.939&deg;N120.593&deg;E <br/> 23.0 km depth </span>

[VIII](#)

[DYFI?VII](#)

[ShakeMapYELLOW](#)



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Location

Data Source US<sup>+</sup>



22.939 °N 120.593 °E depth=23.0 km (14.3 mi)[View interactive map](#)

#### Time

1. 2016-02-05 19:57:27 (UTC)
2. 2016-02-06 06:57:27 (UTC+11:00) in your timezone
3. [Times in other timezones](#)

#### Nearby Cities

1. 24km (15mi) SSE of Yujing, Taiwan
2. 39km (24mi) E of Tainan, Taiwan
3. 45km (28mi) NE of Kaohsiung, Taiwan
4. 60km (37mi) WNW of Taitung City, Taiwan
5. 665km (413mi) E of Hong Kong, Hong Kong

#### Tectonic Summary

The February 5, 2016 M 6.4 earthquake east of Tainan in southern Taiwan occurred as the result of oblique thrust faulting at shallow-mid crustal depths (~ 20 km). Focal mechanisms indicate rupture occurred on a fault oriented either northwest-southeast, and dipping shallowly to the northeast, or on a north-south striking structure dipping steeply to the west. Taiwan lies in a region of complex tectonics, at the boundary between the Philippine Sea and Eurasia plates. To the north and east, the Philippine Sea plate subducts beneath Eurasia towards the north-northwest, along the Ryukyu Trench. South of the island, the South China Sea (on the the Eurasia plate) subducts to the east beneath the Philippine Sea plate at the Manila Trench. Moving north, subduction tectonics transition to arc-continent collision along the western side of Taiwan. At the location of the earthquake, the two plates converge in a northwest-southeast direction at a velocity of about 80 mm/yr.

[http://earthquake.usgs.gov/earthquakes/eventpage/us20004y6h#general\\_region](http://earthquake.usgs.gov/earthquakes/eventpage/us20004y6h#general_region)

## **Earthquakes linked to shale gas exploration cause house prices to fall**



3 March 2016



Fear of fracking can have negative effects on the UK housing market around shale gas sites, economic researchers have warned. The research team, from the University of Bristol, the London School of Economics and Duke University in North Carolina, carried out a study that found licensing and exploration had minimal impacts on house prices. However, two highly publicised minor earthquakes linked to exploratory fracking near Blackpool in 2011 caused a three to four per cent reduction in house prices nearby.

Read more at: <http://phys.org/news/2016-03-earthquakes-linked-shale-gas-exploration.html#jCp>

## **Big Ben volcano: Scientists witness 'amazing' eruption on remote Australian sub-Antarctic island**

By [Lucy Shannon](#)

Updated 1 Feb 2016, 6:35pm Mon 1 Feb 2016, 6:35pm



[Big Ben has erupted at least three other times in the past 15 years. \(Supplied: Pete Harmsen\)](#)

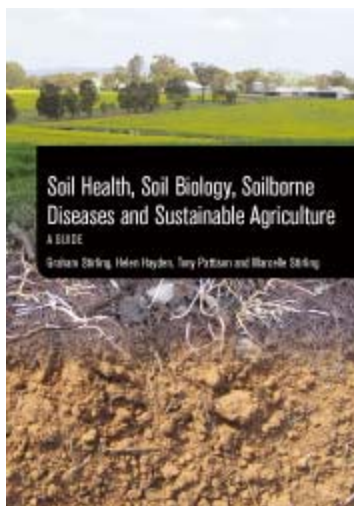
[Heard Island is located in the furious fifties, referring to 50 degrees latitude, where strong winds blow mostly from the west. \(Supplied: CSIRO\)](#)

Scientists on board the CSIRO's research ship the Investigator have taken rare pictures of an eruption of the remote Big Ben volcano.

Big Ben on the sub-Antarctic Heard Island is the highest mountain on Australian territory and is known to have erupted at least three times in the past 15 years.

The neighbouring McDonald Islands are also home to an active volcano.

<http://www.abc.net.au/news/2016-02-01/scientists-witness-big-ben-volcano-erupting-remote-heard-island/7130556>



# Soil Health, Soil Biology, Soilborne Diseases and Sustainable Agriculture

## A Guide

Graham Stirling  
Helen Hayden  
Tony Pattison  
Marcelle Stirling

Biological Crop Protection Pty Ltd  
Department of Environment and Primary  
Department of Agriculture, Fisheries and  
Biological Crop Protection Pty Ltd

Colour photographs, Illustrations  
280 pages, 245 x 170 mm  
Publisher: CSIRO Publishing

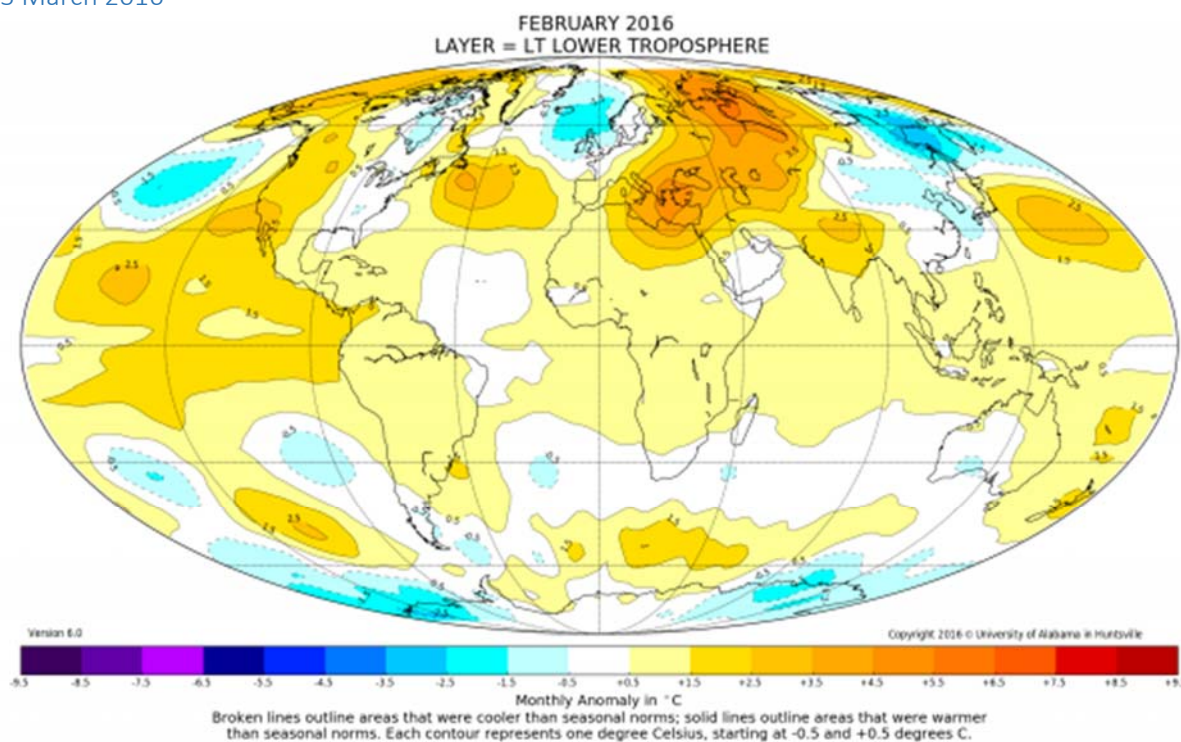
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<http://www.publish.csiro.au/pid/7358.htm>

## February was warmest month in satellite record

3 March 2016



By a statistically significant amount, February 2016 was the warmest month in the satellite temperature record, according to Dr. John Christy, director of the Earth System Science Center at The University of Alabama in Huntsville. Interestingly, however, that record might



have as much to do with an extraordinarily warm month in the Arctic as it does with warming caused by the El Niño Pacific Ocean warming event.

Read more at: <http://phys.org/news/2016-03-february-warmest-month-satellite.html#jCp>

## **New national initiative to preserve the future of horticulture**

4 March 2016

Today, Longwood Gardens and the American Society for Horticultural Science (ASHS) announced the launch of the Seed Your Future initiative, a multi-year effort to combat declining awareness of horticulture among U.S. audiences and promote horticulture as a vital and viable career path for the nation's youth. More than 150 partner organizations, including leaders in horticultural industries, horticultural associations, public gardens, public agencies, K-12 and higher education have already signed on to the initiative which aims to preserve the future of this increasingly at-risk field.

Read more at: <http://phys.org/news/2016-03-national-future-horticulture.html#jCp>

## **Ohio Farmer Continues Life-Long Drive to Improve Environment**

Posted by [Cassie Bable, Public Affairs Specialist, Farm Service Agency - Office of External Affairs](#), on 29 February 2016 at 1:00 PM



Gail Dunlap used the USDA Conservation Reserve Program (CRP) to implement many conservation practices on her land, including restoring nearly seven acres of wetlands on one of her Ohio farms.

Since she was a teenager some 60 years ago, Gail Dunlap has played an active role in her family's seventh generation Ohio farming operation by focusing on ways to

continually improve conservation practices and establish a natural and sustainable way of life.

“Back then, we were not that many years past the Dust Bowl times and farmers in the area were doing a wonderful job of resting the soil with long rotations,” said Dunlap. “I remember even the weeds seemed to be as beautiful as wildflowers.”

<http://blogs.usda.gov/2016/02/29/ohio-farmer-continues-life-long-drive-to-improve-environment/>



**“The good thing about science is that it's true whether or not you believe in it.”**

— [Neil deGrasse Tyson](#)