

news



“DEEP WITHIN EACH OF US LIES A SPECIAL PLACE THAT TRULY FEELS AT HOME IN NATURE.”

DR REESE HALTER. LOVE NATURE

MUSHROOMS AS BEE SAVIOURS

In a major breakthrough, renowned mycologist Paul Stamets and collaborator Walter Sheppard from Washington State University have found that extracts from red-belted polypore mushroom mycelium, or fungal roots, provide an antidote for bees plagued by viruses.

In the 1980s, Stamets watched honeybees moving garden woodchips

to access and feed upon the mycelium. He surmised that the bees were seeking a mixture of sugar molecules (polysaccharides) to dehydrate into honey, the worker bee's only food source. Fast forward to 2014. Stamets had a vision in a lucid dream that the bees were not only feeding from the mycelium droplets, but

also receiving medicine. One of the more robust constituents of honey is a polyphenol, (plant defence mechanism) called p-coumaric acid which controls detoxification pathways in bees, humans and other animals. It turns out that the bees depend upon the mycelium droplets to turn on about four-dozen genes for p-coumaric acid to perform detoxification.

Stamets research team discovered that amadou (Fores) mycelium extract conferred incredible strength to fend off Deformed Wing virus by bloodsucking varroa mites. (An 800-fold decrease in the laboratory).

Bees fed reishi (*Ganoderma*) mycelium extract had a 45,000-fold reduction of Lake Sinai virus, another horrid disease ravaging honeybee populations worldwide.

Reese Halter

ABOVE: THE MYCELIUM OF RED-BELTED POLYPORE MUSHROOMS LIKE THIS COULD AID BEE HEALTH.



WOOLIES LAUNCHES ORGANIC FUND

Woolworths has launched a \$30 million fund to help organic fruit and vegetable farmers, and increase the company's supply of organic produce.

The money will be available over the next five years in the form of grants and interest-free loans of up to \$500,000 for research and development, land acquisition and new facilities or equipment. It's aimed at existing organic farmers and conventional farmers who want to convert to organics.

Funding may be conditional on the growers entering into a supply agreement with the supermarket chain, in some cases an exclusive agreement, Woolworths says. The company hopes the fund will help increase the supply of produce in the rapidly expanding organic sector.

“In the last five years, demand has been growing at a rate of 20 per cent year-on-year in the organic produce category,” Woolworths Supermarkets managing director, Claire Peters, said.

“The Woolworths Organic Growth Fund represents our long-term commitment to satisfying this growing consumer demand. We can help farmers adopt innovative approaches that will enable the range of organic fruit and vegetables on offer to grow.”

The first beneficiary of the fund is Tasmanian apple grower R&R Smith, which is receiving help to build a nursery for the development of a new organic apple variety, with a first harvest expected in 2023.

More info: woolworths.com.au/shop/discover/sustainability/organic-growth-fund

Simon Webster

UNSUSTAINABLE SALMON

In the 2018 incarnation of Australia's Sustainable Seafood Guide, Tasmanian farmed Atlantic salmon has been red-listed because of its high environmental cost. According to Adrian Meder, Sustainable Seafood Program Manager of the Australian Marine Conservation Society, "salmon farming has reached such intensity in Macquarie Harbour that we've had consecutive summers of serious environmental impacts, including massive fish kills."



But not all farmed fish is bad for the environment. "There are many great examples of sustainable fish farming in Australia – oysters, mussels, prawns, barramundi, Murray cod and cobia are great green-list examples of sustainable aquaculture," says Meder. To learn more, visit sustainableseafood.org.au or download the free app.

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SPEAKING TREES



Want to talk to trees? You'll soon be able to, thanks to technology being introduced in Melbourne. In a world-first pilot program led by Swinburne University, \$31,000 worth of tree water sensors are being installed at the community environment park, CERES.

Park managers and members of the public will be able to check how the trees are doing, water wise, through digital platforms. Swinburne water resources engineering senior lecturer, Dr Scott Rayburg, is designing an app through which people can ask a tree how it's going and get a response, such

as "I'm doing well", or "I'm feeling a bit stressed today, could you give me some water". The City of Melbourne has a platform called Urban Forest Visual that allows people to send an email to a tree and then somebody from the City of Melbourne responds to the email. "We want to take this to the next level; instead of a person responding, we want the tree to respond," Dr Rayburg says.

The water sensors may have a dramatic effect on the welfare of the trees. "Instead of trees dying at 80 because they're spending their whole lives in water stress, they'll live to 200–300 or maybe even 400 years old," Dr Rayburg says.

Simon Webster

ABOVE: DR SCOTT RAYBURG WITH ONE OF THE TREE SENSORS.

EVENTS



GARDENS WITH BITE

Grab the kids and head to the Royal Botanic Garden Sydney to delve into the fascinating world of carnivorous plants. Get up close to these creepy and weird specimens while learning about their evolution and the different trap types. You'll also be given your own Venus flytrap and bugs to feed it, and have the opportunity to attach a digital microscope to your smartphone and capture close-up pictures of the traps in action.

WHEN: Last Sunday of the month, 11am–11.45am

WHERE: The Calyx, The Royal Botanic Garden Sydney

COST: Free

DETAILS: thecalyx@rgbsyd.nsw.gov.au; 02 9231 8111

HIGH FIVE GARDENS

Embrace the community spirit of Joe's Connected Garden and tour five adjoining gardens growing more than 500 varieties of fruit, vegetables and herbs.

Gates link the properties, which all follow permaculture practices. There'll be speakers and demonstrations, a sausage sizzle and plant sale.

WHEN: 16–17 February, 10am–4.30pm

WHERE: 6 Argent St, Elizabeth Grove SA

COST: \$8 adult, \$6 concession.

All proceeds donated to charities.

DETAILS: 0402 140 219