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FRIENDS OF HODDLES CREEK NEWSLETTER

Early bird catches worm

Who hasn't seen a kookaburra perched patiently on a fence post watching eagerly for a tasty morsel? And of course, the sightless earthworm venturing out of the safety of the earth doesn't stand a chance!

Our local kookaburra is actually a terrestrial tree kingfisher belonging to the genus *Dacelo* which is an anagram of *Alcedo*, the Latin word for a kingfisher. Four different species of kookaburra are found within Australia and Papua New Guinea.

The laughing kookaburra *Dacelo novaeguineae* is perhaps the most widely known and is native throughout eastern Australia as well as being introduced to Tasmania, the extreme south-west of Western Australia, and New Zealand. The name kookaburra comes from the aboriginal Wiradjuri *guuguuburra*, and conveys the familiar sound made at the beginning of its laugh.

Kookaburras can be found in a range of habitats provided there are suitable trees for nesting. Laughing Kookaburras are believed to pair for life and have strong family ties. They nest in naturally occurring tree hollows with all members of the family (offspring from previous years) sharing parenting duties for the young. Their laughter serves the same purpose as a great many other bird calls – to mark territorial borders.

Photos by Michelle Knoll

Great Southern Land

No, it's not Australia. Try something way further south – the coldest and windiest place on earth – Antarctica.

For 26 days this past December - January, Hoddles Creek local Jennifer Seabrook, together with husband Ray and 44 other intrepid adventurers, set sail for Antarctica and several Australian and New Zealand sub-Antarctic islands, on the Russian expedition vessel the Akademik Shokalskiy. What they saw and photographed combine to make an intriguing and breathtaking talk that is not to be missed.

Please join FOHC for Jennifer's Antarctica talk.

When: Monday March 19, at 7 pm.

Where: Hoddles Creek Primary School

Jennifer's show and tell will be followed by questions and a delicious supper.

Thanks to Yarra Ranges Council for their generous printing of the Newsletter.

Gum leaves – too valuable to waste

"Think of gum leaves as a wonderful resource for your garden . . ."

Australians are habitual burners. It is our default way of tidying up around our properties. Everyone feels under pressure to prepare for 'the fire season'. We burn off for fear of burning up.

But burning off gum leaves releases noxious gases and particulates, which at certain times of the year contribute to palls of smog over low lying areas with potential ramifications to human health. Burning off also releases significant amounts of carbon dioxide into the atmosphere contributing to global warming. Dry gum leaves can catch fire extremely quickly releasing huge amounts of radiant heat. Burning off can be dangerous to life and property. It is also one of the common ignition points for wildfires. And to cap it off it is a terrible waste of a valuable resource.

Great alternatives to burning off

As fuel: We have all witnessed the heat released from dry gum leaves as they suddenly explode into flame. Now imagine you could store that energy and save it for use in winter. Gum leaves make a great source of kindling fuel for your wood stove or heater, for example rolled up solidly in old newspaper. They can also be utilised to produce 'bio-gas' (or methane) with an appropriately designed biogas generator, which can supply a BBQ and produce a nitrogen garden fertiliser as a by-product.

As mulch: Gum leaves have an 'allelopathic' effect on the soil. They contain chemicals that retard the germination of other species. They are a natural herbicide and excellent weed suppressant mulch that will help drought proof your garden beds.

As compost: Contrary to popular belief composted gum leaves are actually very good for the soil, being a significant source of carbon rich humus. Humus acts as a giant sponge, storing water and nutrients and promoting beneficial microbes in your soil. Humus helps bring the soil to life promotes more resilient plants.

As BioChar: This is the process of actually burning the gum leaves with very little oxygen (such as in a sealed barrel or covered pit in the ground). The gas that is produced (called 'producer gas' or 'wood gas') can be utilised to run internal combustion engines (as was done in the second World War when fossil fuels were in short supply). Burning gum leaves in this way (anoxically) leaves a carbon rich 'bio-char', which is an excellent soil additive and long-term store of carbon.

More tips for handling gum leaves

- Process gum leaves through a mulcher or run over them with a mower (with a catcher) first to make a finer 'shredded' product for both mulch and compost. This will better retain moisture and promote decomposition.
- Divert your grey-water to the composting pile of gum leaves in summer to keep them moist and speed up decomposition.
- Mix gum leaves with lawn clippings for both biogas and composting. The lawn clippings are high in nitrogen and will facilitate the process of biodegradation. The addition of a nitrogenous fertiliser will also speed up the composting process.

Useful links

DIY Biogas
http://opensourceecology.org/wiki/Biogas
https://small-farm-permaculture-and-sustainable-living.com/methane_generator/

Composting Gum leaves
http://www.abc.net.au/gardening/stories/s4245311.htm
http://homeguides.sfgate.com/eucalyptus-bad-compost-65137.html
https://permaculturenews.org/forums/index.php?threads/eucalyptus-leaves-as-mulch.9303/
https://en.wikipedia.org/wiki/Allelopathy

Biochar
http://www.instructables.com/id/Make-your-own-BioChar-and-Terra-Preta/
https://en.wikipedia.org/wiki/Biochar

Top: Zucchini growing happily in gum leaf mulch.
Bottom: Biogas generator as a source of fuel for a BBQ.

The mysterious smell of rain

Living in the bush brings many simple pleasures, and one that I enjoy most in the summertime is the smell of rain. I didn't know this phenomenon had a name, but I stumbled across it recently and a little internet research (who uses books these days?) has provided some fascinating information.

The smell of rain has been described as **Petrichor** and is the earthy scent produced when rain falls on dry soil. This word is constructed from the Greek words 'petra', meaning 'stone', and 'ichor', which refers to the fluid that flows like blood in the veins of the gods in Greek mythology.

The term was first described (as the familiar smell after a light rain) by two Australian scientists, Isabel Joy Bear and Richard G. Thomas, in the March 7th edition of Nature Journal 1964. Thomas had been trying for years to identify the cause for what was this long-known and widespread phenomena.

The odour is particularly noted in arid regions and widely recognised and associated with the first rains after a period of drought. There is also some evidence that drought-stricken cattle respond in a restless manner to this 'smell of rain'. The smell had actually been described already by a small perfumery industry operating out of India, which had successfully captured and absorbed the scent in sandalwood oil. They called it 'matti ka attar' or 'earth perfume', but its source was still unknown to science.

By steam distilling rocks that had been exposed to warm, dry conditions in the open, Bear and Thomas discovered a yellowish oil trapped in rocks and soil, but released by moisture, that was responsible for the smell. The oil itself was named petrichor, the blood of the stone. The smell itself comes about when increased humidity, a precursor to rain, fills the pores of stones (rocks, soil, etc) with tiny amounts of water. While it's only the tiniest amount, it's enough to flush the oil from the stone and release petrichor into the air. This is further accelerated when actual rain arrives and makes contact with the earth, spreading the scent into the wind.

This sensory sequence of events, has since been captured visually by scientists in America (Nature Communications Journal, January 14th 2015). Using high-speed cameras, researchers observed that when a raindrop hits a porous surface, it traps tiny air bubbles at the point of contact. As in a glass of champagne, the bubbles then shoot upward, ultimately bursting from the drop in a fizz of aerosols. A notable cause for celebration one might say, and if you don't have any bubbly in the fridge, just take a stroll outside and enjoy the smell of rain.

Meryl Knoll

Photo credit: Tadam

Curse of the ragwort

Ragwort (Senecio jacobaea), a declared noxious weed in the Yarra Ranges, seems to be making a comeback in Hoddles Creek. Over spring and summer, an increasing number of outbreaks have been spotted, so we thought it would be a good idea to make sure residents appreciated the need to eradicate this plant from their properties.

Ragwort is an erect perennial herb that grows to 1.2 metres tall. The plant has an initial rosette of leaves and then produces erect stems with numerous yellow daisy shaped flower heads. Declared noxious weeds have the potential to cause serious environmental and/or economic harm. All land owners and land occupiers are responsible for managing noxious weeds on their land.

Why is ragwort such a problem?

First, its seeds are spread by wind, water, animals, farm implements, agricultural produce (including hay) and on clothing and other equipment. Second, ragwort seeds can remain viable in the soil for up to 16 years. Third, ragwort is poisonous to grazing animals, both when fresh and dried in fodder. It can cause cumulative liver damage, jaundice, wasting and sometimes death. Dairy cattle forced to graze on ragwort produce tainted milk.

Ragwort is a major pasture weed, especially on land grazed by horses and cattle. It produces dense foliage close to the ground, which suppresses and prevents regeneration of other vegetation.

How do you get rid of it?

Spraying with herbicide and removal of the plants by hand are the best methods. If the plants are flowering, care should be taken to contain the flowers and avoid seeds spreading.

Ragwort in full flower, showing the typical daisy-like flower heads.

Out of the blue

The Blue-winged Kookaburra, or Northern kookaburra is quite different to the Laughing Kookaburra. It has a white iris which can make it look mad, is slightly smaller than the Laughing Kookaburra, with a slimmer body, larger head and even more massive bill. Its head is white with narrow dark streaks but no eye stripe. Upperwing-coverts are extensively blue and the rump is uniformly blue.

The Blue-winged kookaburra's common territorial call is very different to the Laughing Kookaburra, in fact have been described as "insane sounding", but the discordant chorus of family groups is similar.

Its behaviour is similar to the Laughing Kookaburra, though it tends to be more shy and less likely to hang around humans. It prefers tropical and subtropical habitats and is rarely seen in dry forest or dry open areas.

Like to join FOHC?

The Friends of Hoddles Creek are always on the lookout for new members to add new ideas, new helpers and new friends to our group. If you'd like to join, simply contact us with your name, address and phone or email details. You can mail these to FOHC, PO Box 298, Yarra Junction, Vic 3797, or email us at friendsofhoddlescreek@gmail.com.

See more at our new website (www.friendsofhoddlescreek.com) or on Facebook – just search 'Friends of Hoddles Creek' or 'FOHC'.

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