

WILDLIFE DIARY

May 2013



Great Finds

Not found in the Redland Bayside area but this is a very exciting find indeed worth reporting. Quoll sighted in SEQ. for more details go to <http://tinyurl.com/c8866z5>

Did You Know?

Did you know riparian corridors often support higher biodiversity than non-riparian habitat and provide a valuable refuge for many species during droughts and fires (Tubman and Price, 1999)? The nature of this habitat makes it potential climate refugia. Climate refugia are those areas less likely to undergo significant climate induced changes and therefore valuable as they protect biodiversity (NCCARF, 2011). As climate change continues it's expected that the koala distribution will contract East and South and it would be prudent to protect and rehabilitate the more mesic habitats currently threatened by urbanisation (Adams-Hosking, 2011).

POPULATION MATTERS

23 Million milestone nothing to celebrate.

The arrival of Australia's 23 millionth person tomorrow is no cause for celebration, according to Sustainable Population Australia (SPA).

National President of SPA, Ms Jenny Goldie, noted that in 1994 the Australian Academy of Science had said: 'In our view, the quality of all aspects of our children's lives will be maximized if the population of Australia by the mid-21st Century is kept to the low, stable end of the achievable range, i.e. to approximately 23 million.'

Ms Goldie says: "But we are not stabilising our numbers. We continue to grow at Third World rates, at 1.7% pa."

<http://population.org.au/articles/2013-04-23/mr-23-million-milestone-nothing-celebrate>

Did you know that most researchers agree that noise can affect an animal's physiology and behaviour, and if it becomes a chronic stress, noise can be injurious to an animal's energy budget, reproductive success and long-term survival (Radle, 2007). Fahrig and Rytwinski (2009) said there are three behavioural responses to roads and traffic: (i) avoidance of the road surface, (ii) avoidance of traffic emissions and disturbance (noise, lights, chemical emissions), and (iii) the ability of the animal to move out of the path of an oncoming vehicle (labeled "car avoidance"). Fahrig and Rytwinski (2009) highlighted species such as the koala were vulnerable to traffic disturbance, which included noise, while Jackson's (2000) research shows some wildlife species avoid areas adjacent to highways due to noise.

2013 World Environment Day Dinner 25th May 6:30pm

To highlight this most important day Bayside Branch is celebrating with a special dinner. Our guest presenter for the night is Dr Peter Davie, Curator, Queensland Museum. Peter is the principal author of the two volume 'Wild Guide to Moreton Bay and adjacent coasts' and has a wide range of interests and specialties from coastal wetlands to seagrass to crustaceans and much, much more in the marine wildlife arena. Peter will bring to life the amazing wildlife of Moreton Bay both great and small through his wonderful stories and photographs. His in depth knowledge of Moreton Bay and its wildlife makes for a wonderful evening of entertainment and learning. Our special night starts with tasty snacks and a pre-dinner drink & includes a sit down 2-course dinner.

Enquiries ph: Doreen 3206 0368 or Steve 3824 0522

Using your iPhone to report a Bush Curlew

Seen a Bush Curlew, let us know by taking a photograph with your iPhone or similar GPS capable phone. Click on this link to participate. <http://tinyurl.com/azv4yqh>

Great Walks



It's time to go searching for the Glossy Black Cockatoo. Great places to see them in the Redlands are the Bay Islands, Mt Cotton, Glider Reserve and Scribbly Gum Reserve. For more details about the Glossy Birding Day visit <http://wildlifebayside.wordpress.com/2013/05/06/glossy-black-birding-sunday-19-may/>

WWW

Glossy Black Cockatoo

<http://glossyblack.org.au/>

Mangrove Watch

<http://tinyurl.com/dxe2und>

Moreton Bay Seagrass Watch

<http://seagrassmb.wordpress.com/>

Climate Change, eucalypts and koalas

Climate Change, eucalypts and koalas

The IUCN lists the koala as one of 10 species globally that are most vulnerable to climate change because of their limited capacity to adapt to rapid environmental changes. Christine Adams-Hosking (2011) found that by 2030-2070, the distribution of climatically suitable koala habitat will shift in an eastwards and southwards direction.

See: http://www.nccarf.jcu.edu.au/terrestrialbiodiversity/documents/koalacasestudy_final.pdf

The research identified future 'climate change refuge', Local Government Areas of high priority for koala conservation and adaptation. One of these areas was the Redlands. See map.

So just what is happening to our eucalypt forests in a time of climate change?

Research has shown that widespread eucalypts are likely to be able to adjust to a changing climate to some extent. This includes species such as *Eucalyptus tricarpa* in southeastern Australia and *Eucalyptus salubris* in southwestern Australia. Evidence of both plastic response and genetic specialisation for climate was found in both species, indicating that widespread eucalypts utilise a combination of both mechanisms for adaptation to spatial variation in climate.

Source: www.nccarf.edu.au/publications/adaptation-climate-eucalypt-species

However, do these widespread species include koala food trees and are these traits relevant to all widespread eucalypts?

The story doesn't end here. It's not only about the right species but in many cases down to the right tree.

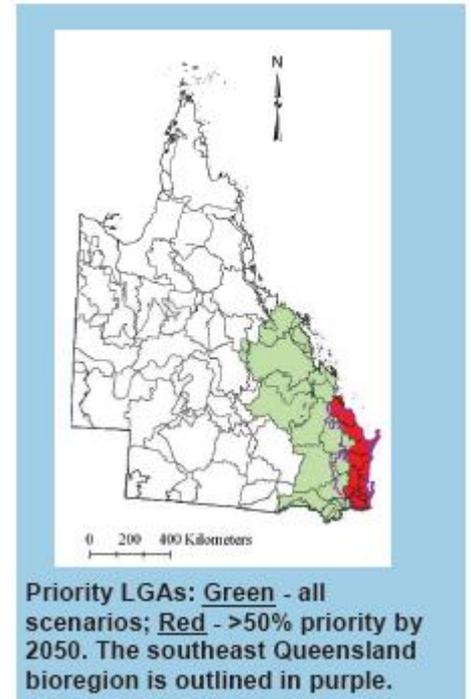
Research showed that koalas at Bermagui - Mumbulla chose to visit trees of "higher quality" which contained higher concentrations of available nutrients and lower toxins when compared with nearby trees of the same species. Source: http://fscmn.com.au/fileadmin/bega/registrations/community/fscmn07/docs/E_Stalenburg_-_Nutritional_ecology_of_the_Mumbulla_Koala.pdf

The same research found koalas visited eight different eucalypt species, four of the subgenus monocalypt and four of the subgenus symphyomyrtle. All the species had highly variable chemistries and it was found that two neighbouring trees of the same species had such different leaf chemistry that, to a koala, one might have had leaves that tasted like chocolate and the other like cardboard (Stalenberg, 2010).

Koalas avoided trees of all species with very low quality foliage (low nitrogen, low digestible energy and high tannins or high sideroxylonal concentrations); but they did not necessarily choose to visit the highest quality trees in a survey plot. This trend suggests that koalas are able to meet their nutritional requirements by eating the more common moderate quality trees and do not need to waste time and energy finding the very best quality trees available. Although koalas still visited species that had lower average nutrient concentrations the individual trees that koalas chose to visit had leaves that had much higher nutrient concentrations than the average for that species (Stalenberg, 2010).

Climate change could have long term negative impacts on the suitability of leaves for koalas. Research by Stalenberg (2010) suggests that koalas need a diversity of tree species with varied quality foliage so they can pick and choose their foods. This need for diversity may become even more important with climate change as a choice of trees will provide koalas with the capacity to alter their feeding patterns to respond to changing leaf chemistry and maintain a balanced diet over time.

While widespread eucalypt species adaption to climate change is good news but for the koala to survive it will still depend upon forest diversity and leaf quality. The Redlands has all these qualities and protecting koala habitat here provides one of the best chances of saving the koala in Queensland.



Never doubt that a small, group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has. Margaret Mead.

