

WILDLIFE DIARY

November 2015

Great Finds

Carpet python, *Morelia spilota* are on the move, several sited around the Redlands.

Water Dragons, *Itellagama lesueurii* doing well in Birkdale. Taking over the pool.

Australian brush turkey, *Alectura Lathamii* seems to be successfully spreading into Birkdale.

The **Swamp Wallaby**, *Wallabia bicolor* noted as road kill in Thorneside and Alexandra Hills. Though sad to hear it is great to know they continue to live and breed in our urban bushland.

Population

Ending world population growth as soon as possible is critical if the world is to limit global warming to 2oC.

<http://www.population.org.au>

What's in flower

Native Frangipani, *Hymenosporum flavum*, a medium size tree is readily identified by its cream-yellow flowers that form loose panicles, found in riverine and rainforest habitat.

Urbanisation ups the heat

Urban sprawl also encourages the Urban Heat Island effect (UHI) a phenomenon in which ambient air temperatures are higher in urban areas than surrounding rural areas (United States Environmental Protection Agency, 2012)? UHI have been measured for many cities including Melbourne, where a peak temperature differential of up to 7°C has been observed in the central business district. Urban heat islands arise through characteristics of cities that include replacement of vegetation and soil with impervious, heat absorbing surfaces such as concrete and bitumen, installation of tall buildings that reduce airflow and ventilation, and generation of heat and greenhouse gases through human impacts.

Respond to the Planning Scheme

Don't forget to make your submission in response to the DRAFT Redland Planning Scheme. If you need help this site provides you a good template to use.

<http://carp-redlands.org/>

Did you Know?

Did you know an Australian study reviewing over 1200 Southern hemisphere long-term data sets have revealed that climate change is affecting us at a different rate to our northern counterparts? The review found that spring life-cycle events are occurring earlier for terrestrial species in the southern hemisphere than in the northern. The results also revealed that marine species in both the southern and northern hemisphere are being affected at comparable rates. Within Australia, plants are flowering earlier than birds breeding. For example, Australian grape vines in many regions are reaching maturity much earlier. Although this study found some species are already being influenced by environmental triggers, like temperature, many of these datasets are limited.

Did you know bradyspory is the long-term retention of seeds in fruits in a plant canopy in the absence of fire? This trait has also been called 'serotiny', but bradyspory appears to be a more appropriate term. Bradyspory occurs in various taxa in several regions: conifers in North America, Mexico and the Mediterranean; the Cupressaceae, Casuarinaceae, Myrtaceae and Proteaceae in Australia; and the Proteaceae in southern Africa. The geographical distribution of bradysporous plants in Australia, South Africa and North America is strongly associated with fire-prone environments. Fire is viewed as the most significant trigger for the release of seeds and is generally assumed to be the primary selective factor favouring bradyspory (Whelan et al., 1998)

Great Walks



Best visit the Southern Redlands before Redland Council and their developer mates carpet it with houses. The last coastal open space in the Redlands and they want to put 10,000 people on it!

Web Sites

WPSQ Coastal Community Science

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

Make a submission to the

DRAFT Redland Planning Scheme

<http://carp-redlands.org/>

Sea Level Rise

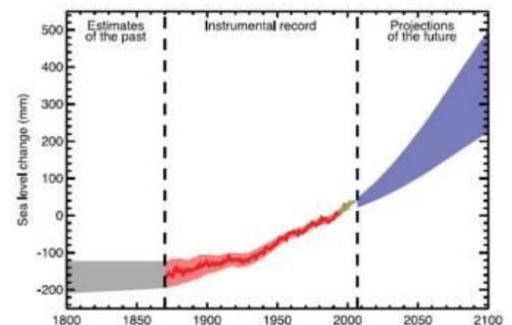
Sea level rise is caused by two processes: thermal expansion (ocean water expanding as it heats up) and additional water flows into the oceans from ice that melts on land. Both these processes are currently being observed.

Over the last century global average sea level rose by 1.7 [1.5 to 1.9] mm per year, in recent years (between 1993 and 2010) this rate has increased to 3.2 [2.8 to 3.6] mm per year. The IPCC report finds that the rate of sea level rise over the last century is unusually high in the context of the last 2,000 years. The sea level has risen by 0.19 m since the beginning of the 20th century.

The IPCC finds that recent observations of global average sea level rise at a rate of 3.2 [2.8 to 3.6] mm per year is consistent with the sum of contributions from:

- observed thermal ocean expansion due to warming (1.1 [0.8 to 1.4] mm per year);
- glaciers (0.76 [0.39 to 1.13] mm per year) ;
- the Greenland ice sheet (0.33 [0.25 to 0.41] mm per year);
- the Antarctic ice sheet (0.27 [0.16 to 0.38] mm per year); and
- changes to land water storage (0.38 [0.26 to 0.49] mm per year).

If emissions continue to track at the top of IPCC scenarios global average sea level could rise by nearly 1 m by 2100 (0.52–0.98 m from a 1986-2005 baseline).



Sea level rise will continue for centuries to thousands of years after greenhouse gas concentrations are stabilised due to the long lag times involved in warming of the oceans and the response of ice sheets.

For the first time the IPCC provides projections for 2300 in its latest report. Sea level rise by 2300 could be kept to less than 1 m if concentrations of carbon dioxide in the atmosphere are stabilised below 500 ppm, or could reach up to 3 m if concentrations of carbon dioxide rise above 700 ppm.

Australia is a coastal society. 85 per cent of the population lives in the coastal region and it is of high economic, social and environmental value to the nation. Nearly 39,000 residential properties are located within 110 metres of soft, erodible shorelines.

A study of 29 locations in Australia found that for a mid-range sea level rise of 50 cm extreme sea level events that happened every few years now, are likely to occur every few days in 2100.

On average, Australia will experience a roughly 300-fold increase in flooding events, meaning that infrastructure that is presently flooded once in 100 years will be flooded several times per year with a sea level rise of 50 cm.

<https://www.environment.gov.au/climate-change/climate-science/climate-change-future/sea-level>

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



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