

WILDLIFE DIARY

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Great Finds

Did You Know?

White-crowned Snake, *Cacophis harriettae* found on front door-step in Wellington Point.

POPULATION MATTERS

Australia's population size is a crucial conservation issue. Given the historical pattern of human settlement, and the likelihood that the trend will continue, the high population growth advocated by some will have a huge impact on our ability to conserve species (ECOS, 2004).

How Cool

Cool Refugia - two major climate change adaption strategies for habitat management include the protection of existing cool habitat and restoration of foliage cover in deforested areas that formerly supported cool habitat. While this strategy applies to rainforest it may well be applicable to riparian corridors and other similar cooler habitats along coastal plains.

Cool refugia like the rainforest in Eprapah Creek Corridor, are areas of high biodiversity conservation value even though they may be small in size and otherwise not flagged by current ecosystem mapping techniques? Of note eighteen species of land snails belonging to 9 families of land snails were recorded during a survey. Four snail species were of the environmentally sensitive family Charopidae. When it came to spiders the total spider diversity recorded across three studied reserves consisted of 119 species belonging to 100 genera and 36 families. Of the 119 species taken, only 51 are known and named whereas 41 are clearly new species. Likewise a diverse fauna of beetles comprising 17 species of Carabidae, 10 species of Tenebrionidae and 13 species of Scarabaeinae (dung beetles) were recorded during a survey. Interesting to note by far the greatest diversity seemed to be confined to the wetter Eprapah Creek corridor. The challenge is protecting these often tiny hotspots of biodiversity in an otherwise dry, fire-prone landscape.

Extinction is forever

Urbanisation and the consequential loss of bushland have seen the following notable extinctions in the Redlands.

Tiger Quoll, *Dasyurus maculatus maculatus* one of Australia's largest carnivorous marsupials lost from the shire within living memory.

Yellow-bellied glider, *Petaurus australis*, last seen in the German Church Road / Valley Way Mt Cotton area in the early 1990's. Urbanisation destroyed their habitat.

Did you know suburban areas become more homogeneous (similar to one another), being increasingly dominated by a particular suite of native species, including rainbow lorikeets, noisy miners, crested pigeons and Torresian crows? These are all birds that respond positively to the presence of trees and shrubs, and it is likely that the increased homogeneity among suburban sites is due to an increase in vegetation cover within the previously "bare" suburbs.

While within the larger patches of forest (bushland), research revealed the expected high total diversity of native bird species: from 29 sites in large tracts (over 100 hectares) of native eucalypt forest that were surveyed in both the early 1990s and the mid 2000s, 77 native and no introduced bird species were recorded. Averaged over both time-periods, the species recorded at the most bushland sites were yellow-faced, white-throated and scarlet honeyeaters, rainbow lorikeet, grey fantail, rufous whistler and striated pardalote. While a few species were common in both forest and suburbs, there were large and consistent differences in community composition between forest and suburb in both time-periods. Bushland sites had a distinctive set of bird species, most of which were uncommon in the suburbs. There was also less homogeneity among bushland sites than was the case for suburban sites – bushland areas showed more local variation in their bird species composition.



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!

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Urban Sprawl and Habitat Loss

<http://prezi.com/wrlyca3x0zby/urban-sprawl-and-habitat-loss/>

Queensland Govt. destroying National Parks

<http://tinyurl.com/ovr3wsf>

Moreton Bay Seagrass Watch

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

The facts on human population

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

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>

Urban sprawl

Within the past 10 years private amenity space has largely disappeared from the rear of new suburban houses in Australia. This is characterised by an increase in plot coverage from 30-40% to 50-60% or even more. The change appears both permanent and uniform, as it is to be found in all major Australian cities, except Adelaide. It appears to be confined to Australia, in other parts of the world where back gardens have been standard features, North America, New Zealand, Northwest Europe, this trend is not to be found. The outer suburban landscape in Australia has ceased to be one of large gardens with trees. Such landscapes are now confined to the inner suburbs. This trend represents a loss that has serious ecological implications. It also raises important questions about lifestyles changing for the worse, a trend rendered permanent by the changes to the housing stock. (Hall, A. C & Griffith University, Urban Research Program, 2007).

Urban sprawl is a post-World War II phenomenon. Several decades of unchecked urban sprawl have resulted in a host of environmental, economic, and social problems. It has resulted in the loss of agricultural lands, loss of forests, wetlands, and wildlife habitat, alterations in hydrology and increased air and water pollution.

There is also the obvious increase in petro use and CO2 release and increased infrastructure costs.

We know as a consequence of ongoing urban development, koala populations are increasingly under pressure from habitat loss and the additional threats associated with vehicles, dogs and disease - compounded by the stress of living in an urbanising area. Read the Koala Report.

http://devwatchredlands.files.wordpress.com/2013/06/decline_of_the_koala_coast_koala_population_population_status_in_2008.pdf

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.

Studies around the world have demonstrated a correlation between species richness and human population density.

Studies compared the distribution of species richness for birds, mammals, amphibians, butterflies and reptiles, with human population density, and found a positive correlation for them all, except reptiles. Most reptiles live in sparsely populated desert regions, but all other taxa are strongly correlated with human settlements in both countries. Researchers say this correlation arises because both people and animals are attracted to the most productive landscapes. Early settlers were probably initially drawn to sites with fertile soil and easy access to water, later spreading outwards from these hubs.

Where we find lots of species, we also find lots of people; and in Australia, that's the east coast.

Urban sprawl also results in fragmentation. This is the division of forests, bushland or grasslands into smaller, disconnected pieces. Instead of a large continuous landscape it is broken into a patchwork mosaic: small sites of original habitat separated by lawns and houses. Wildlife can no longer travel from one patch of habitat to another without coming into contact with humans. The effect this has on wildlife varies from species to species.

So what does this mean for conservation?

It seems the answers lie in how we choose to approach future conservation efforts.

Right now we can 'save as much as We can' by retaining habitats in suburbs,

but in the future researchers say we should consider two major issues: human population growth and conservation of maximum biodiversity within future development frameworks (Luck & ECOS, 2004).

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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