

WILDLIFE DIARY

April 2010



Great Finds

Did You Know?

Gehrya Dubia is a native gecko with one recently found at Wellington Point. A grey brown gecko with irregular mottling it forages at night. It is distinguished from the Asian gecko by the inner digit which does not have a claw. Asian geckos also have small spines than run along the edges of their tail and lower back.

Firefly, Family Lampyridae, found at Mt Gravatt.

50 cm long **Curry Seacucumber**, *Stichopus hermannii* found on Amity Banks.

POPULATION MATTERS

The Australian Conservation Foundation has nominated human population growth as a "key threatening process" to Australia's biodiversity under the Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act).

Native snails

A total of 43 species of land snail belonging to 12 families and five introduced species are found in the Brisbane area. Compared with insects and spiders the land snails are a comparatively small group of invertebrates in Brisbane City. It is somewhat axiomatic (taken for granted) within the snail world that as suburbia moves in native land snails move out. Only a few hardy native species manage to survive together with a range of adaptable introductions. However, experience has shown that native land snails do not require a large area of greenspace in which to eke out a living and the small patches of Brisbane bushlands that remain are more than adequate to maintain a robust land snail fauna. BCC & QLD Museum

Fireflies (Family Lampyridae)

Fireflies, despite their name, are actually small soft-bodied beetles. Males fly back and forth above the ground just after dusk, flashing a light from their abdomen. They have enormous eyes and are on the lookout for females on the ground who flash in reply. There are several species in the Brisbane area. One is known from mangroves along the river bank, and displays in early spring. The grubs of fireflies feed on small snails which they find among the leaf litter. BCC & QLD Museum

Seacucumber and predators

Predation is a determining or influencing factor in community structure and population dynamics. Some species have developed interesting strategies to deal with predators. The Holothurians (Seacucumber) is one such species, using the thickness of its body wall, toxic and noxious skin and organs, burrowing, body swelling and stiffening as some of the strategies to deter predators. Evisceration is one of the most interesting strategies which is where the animal violently expels part or all of the gut. It is also reported they will shed pieces of their body wall in response to an attack by a gastropod.

Did you know SEQ is a sub-tropical and temperate hotspot, one of Australia's most diverse areas? It is the most biologically diverse area in New South Wales and southern Queensland. It has a variety of significant habitats: subtropical rainforest, wet sclerophyll forest, mountain headlands, rocky outcrops and transition zones between forests. Unfortunately, in 2007 – 2008 the SEQ bioregion accounted for 13.04% of Woody vegetation clearing in Queensland, with about 20% of clearing in SEQ due to urban development and infrastructure.

Did you know urban development alters the physical and abiotic environment by increasing the amount of impervious surfaces and decreasing local water holding facilities? It has been shown by research that if the surrounding catchment was covered by more than 20% impermeable surfaces there was a significant reduction in stream biota and health.

Did you also know a natural green environment can provide effective relief from everyday stress, improve concentration, enhance worker productivity, improve self esteem, boost immunity, and promote healing and recovery after an accident or illness? It is shown the degree of human psychological benefit was positively related to species richness. While benefits did increase with greenspace area, the relationships with plant and bird richness were generally stronger.



Great Walks

Recent rain has re-vitalized our wetlands, Black Swamp Cleveland, Wellington Pt Wetlands cnr of Starkey St/Duncan Rd, Whistling Kite Wetlands Russell Island, Coochiemudlo Island Melaleuca

wetlands are just some of the many worth visiting.

WWW

Population matters

www.population.org.au

Seacucumber defence

<http://www.youtube.com/watch?v=IKWSLg5PDIU>

Enviro News

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

Relevant to Mary Street Birkdale

www.youtube.com/watch?v=7s96oPzbO7M

Native Vegetation Property Management

<http://live.greeningaustralia.org.au/nativevegetation/pages/page3.html>

Greenspace

The urbanisation process causes loss and fragmentation of natural habitats and places high pressure on the remaining areas of nature in urban regions.¹

Today only 17 per cent of South East Queensland (SEQ) is national park or state forest, compared with 43 per cent of the equivalent land mass in the greater Sydney region.² A more disturbing figure is that based on a 1993 regional scale analysis of landscapes in SEQ, which showed that less than 7% of this region can be classified as available for recreation. It is most likely considerably less than 7% because during the analysis tenure was not considered and therefore some of this land may be in private ownership and not available for recreation.³ Clearly there is insufficient greenspace or recreational space for the current human population let alone wildlife.

Further, 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 as 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.⁴

It is of little surprise then that we have seen a decrease in open woodland and forest birds as this is consistent with lowland land clearing due to land clearing and suburbanisation.⁵ Consequently human well-being and the future of our urban wildlife are under great threat.

Greenspace and the lack thereof is becoming a major issue in our over crowded urban centres. Greenspace is an important part of complex urban ecosystems and provides significant ecosystem services. It benefits urban communities environmentally, aesthetically, recreationally and economically.⁶ A big natural and semi-natural forest area can act as an ecological buffer and protect the environmental quality of a city and provide habitats for wildlife. At the city level, a green network system of green wedges, parks and green corridors helps to limit future urban expansion, improve urban environmental quality and serve as habitats and migration routes for wildlife. At the neighborhood level, green extensions and connections of riverside greenway, road greenway, parks and vertical greening permeate into the built-up areas. They provide open space close to residential areas and offer places for recreation. This three-level green system can constitute an integrated ecological network for urban sustainable development for a city.

With respect to wildlife there has been plenty of work undertaken on the value of wildlife corridors in conserving native fauna. A number of identified general principles for the design and management of corridors are:

- Corridor networks must connect larger habitat patches;
- Design and establishment of wildlife corridors must be based on explicit restoration and conservation goals;
- Evaluation of a corridor's role in establishing and maintaining connectivity between wildlife populations must be the criteria for evaluating its effectiveness;
- Ongoing management, protection and monitoring to assess effectiveness; and
- Corridor networks developed within a framework of landscape management to integrate native conservation with production.⁷

What must also be addressed is fragmentation. This can be achieved by expanding the area of habitats protected for nature conservation; maximizing the quality of existing habitats; minimizing impacts from surrounding land uses; and promoting connectivity of natural habitats.

Clearly if we are to develop sustainable cities in the future it will require more use of ecological principles in the design, planning, construction and management of cities.⁸

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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¹ Mortberg U 2009, 'Landscape ecology analysis and assessment in an urbanizing environment', in *Ecology of Cities and Towns, A comparative approach* (Eds McDonnell MJ, Hahs AK & Breuste JH).

² Peter Spearritt. Brisbane Institute. The 200km City from Noosa to the Tweed. <http://www.brisinst.org.au/pdf/launch200km.pdf>

³ Outdoor Recreation in Queensland – the Big issues.

⁴ Hall T, 2007, Where have all the gardens gone? An investigation into the disappearance of back yards in the newer Australian suburb, Urban Research Program Research Paper 13, August 2007

⁵ <http://www.anra.gov.au/topics/vegetation/assessment/qld/lbra-south-eastern-queensland.htm#birds>

⁶ Li, Feng, Wang, Rusong, Paulussen, Juergen & Liu, Xusheng 2005, Comprehensive concept planning of urban greening based on ecological principles: a case study in Beijing, China, *Landscape and Urban Planning Vol 72 issue 4 pp 325-336*.

⁷ <http://live.greeningaustralia.org.au/nativevegetation/pages/page115.html>

⁸ McDonnell MJ, Hahs AK 2009, 'Comparative ecology of cities and towns: past, present and future' in *Ecology of Cities and Towns, A comparative approach* (Eds McDonnell MJ, Hahs AK & Breuste JH).