

WILDLIFE DIARY

August 2009



Great Finds

Did You Know?

Glossy Black-Cockatoos, *Calyptorhynchus lathami*, seen feeding in a Casuarina tree in Mt Cotton.

Threatened species day 7th September

In memory of those species now lost from our region

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.

POPULATION MATTERS

Growth for the sake of growth is the ideology of the cancer cell.

John Nichols - novelist (1940-)

National Threatened Species Day - 7th September

The last thylacine to walk upon the earth was a female kept in Beaumaris Zoo near Hobart. Problems with the zoo during 1935 - 1936 meant the thylacine and other animals were neglected. It was during September 1936, housed in an open topped wire cage with no access to a den she had to bare the extremes and un-seasonal weather, at night temperatures were below zero and during the day they reached 38°C. On the 7th September it became too much for her, alone and stressed she closed her eyes on the world for the last time.

Winter native frogs

Red-back toadlet, *Pseudophryne coriacea*, can be heard calling around the wetter areas of the Redlands. Glider Reserve is one such place.

Greatest Threat to Biodiversity

The greatest threat to biodiversity is the size and rate of growth of human population. Everyday, more people need more space, consume more resources and generate more waste as world population continues to grow at an alarming rate.

Source: <http://australianmuseum.net.au/Whats-happening-to-Australias-biodiversity>

Did you know **Poinciana**, *Delonix regia* is a weed; while a pretty tree it's still a weed? It is native to Madagascar where it's now listed as Vulnerable because of the extensive land clearing that has occurred in that country. Poinciana allegedly takes its name from a 17th Century Governor of the French West Indies.

Did you know in eastern Australia **land snails** number approximately 1200 species with almost 900 requiring formal description? Here they are particularly diverse in rainforest with relatively few species living in drier sclerophyll communities. They range in size from a few millimeters to 7cm. The very large Giant Panda Snail, *Hedleyella falconeri*, lays the largest known eggs of any Australian land snail with the eggs measuring almost 2cm in diameter. Native snails are also an interesting species. Take the rainforest semi-slug *Fastosarion aquila*, for example. The extra flaps of tissue that cover the shell when the animal is active act as secondary breathing surfaces. These snails can absorb oxygen direct from the atmosphere much like frogs. The family **Rhytididae** is a group of predatory carnivores that feed on a range of invertebrates including other snails. While generally small some can be quite large. Our native snails don't adapt well to environmental changes and therefore make great environmental indicators. In the Redlands and Bayside area there could be at least 43 species of land snail belonging to 12 families but we just don't know because our knowledge of our biodiversity is so poor.

Did you know koala habitat includes woodland where koalas currently live; or a partially or completely cleared area that is used by koalas to cross from (1) one woodland where koalas currently live to another woodland where koalas currently live; or a woodland where koalas do not currently live, if the woodland primarily consists of koala habitat trees; and is reasonably suitable to sustain koalas.



Great Walks

The Glider Reserve at Alexandra Hills is always a fantastic place to walk day or night. With the warming weather the reserve abounds with birds.

WWW

Population matters

www.population.org.au

Weeds

<http://search.weeds.org.au/>

Frogs

<http://frogs.org.au/frogs/ofQld/Brisbane>

Threatened Species Day

<http://www.environment.gov.au/biodiversity/threatened/ts-day/index.html>

the Status of Mangroves

What is a mangrove? It's a tree, shrub, palm or ground fern that normally grows above mean sea level in the intertidal zone of marine and estuarine environments. It's interesting to note many families of plants that contain mangroves are actually more often found in upland habitats such as rainforest. Just one family is exclusively mangrove, Avicenniaceae. Even the true mangrove family, Rhizophoraceae, has only 4 of its 16 families represented in tidal wetlands. So how many mangroves are there in Moreton Bay?

Moreton Bay has 8 species of mangroves, seven of these are trees; **Grey Mangrove**, *Avicennia marina*, dominates and **River Mangrove**, *Aegiceras corniculatum*, is common along river banks. The others are **Milky Mangrove**, *Excoecaria agallocha*, **Red Mangrove**, *Rhizophora stylosa*, **Yellow Mangrove**, *Ceriops australis*, **Orange Mangrove**, *Bruguiera gymnorhiza* and **Black Mangrove**, *Lumnitzera racemosa*. So what is the status of our mangroves?

In December 1997 there was estimated to be 144 km² of mangroves and 50 km² of saltmarsh/claypan between Caloundra and Southport. It is estimated between 1974 and 1987 that 8.4% of SEQ mangroves and 10.5% of its saltmarsh/claypan communities had been lost. Within Moreton Bay this loss is estimated to be 20% since European settlement, 1240 ha having been destroyed within Moreton Bay between 1974 and 1989 and a further 1200 ha from 1987. It should be noted Gold Coast canal estates are responsible for the loss of 3% of Moreton Bay's mangroves. These losses are not always due to humans. In November 1997 280 hectares in southern Moreton Bay died due to a hailstorm, resulting in loss of bark, branches and pneumatophores. While natural events cause significant damage, losses in SEQ are primarily due to human activities and unfortunately new sinister impacts are starting to emerge. These include genetic damage to *Avicennia marina* and *Rhizophora sp* caused by hydrocarbons found within the sediment derived from stormwater. The damage manifests itself in the form of mutation seen as 'albino' propagules attached to parent trees. The affected propagules lack chlorophyll and normal green coloration, leaving them yellow or red. If they do establish and grow leaves they soon die once the seedlings reserves are depleted. Lota Creek, Bulwer Island, Cleveland and Erapah Creek, Victoria Point are some of the areas where this genetic damage has been observed. While there have been many losses in the past there have been gains. Between 1944 and 1983 the mangroves at Oyster Point Bay, south Cleveland doubled in area. Current losses of mangroves appear set to continue with the push by the State Government for a 2nd runway in Brisbane and expanding marine infrastructure in the Southern Moreton Bay region. Illegal clearing of mangroves continues albeit on a small scale but still an issue.

Mangroves provide habitat, food, coastal protection and trap silt and nutrients and like seagrass they are very productive. The United Nations Food and Agriculture Organisation (FAO) estimates in 1985 the average global fishery yield from about 82,000 km² of mangrove waters is 9 tones of fish, crabs and shrimp and 2 tons of snails and bivalves per square kilometre. We know production of fishery resources in mangrove communities is affected by geographic and climatic conditions and community structure. Moreton Bay mangrove communities appear very productive. *Avicennia* mangrove communities in the Brisbane River were estimated to produce 2.3 – 3.5 g dry weight m² day⁻¹. We know there is high biomass and density of fishes using subtropical *Avicennia* forest, however, there is a possibility of diversity, density and biomass declining with distance inside such forests. This does not detract from their importance as small fishes do use inland mangroves to avoid large predatory fishes, subtropical mangroves being noted to support intermediate carnivorous fishes, which also make up a high percentage of commercial and recreational catch. For example, *Avicennia marina* (subtropical) forest in Moreton Bay support 42 species of fish at a density of 0.27 ± 0.14 fish m⁻², 75% of economic value and 25.3 ± 20.4 g m⁻², 94% of economic value.

It is this high productivity that supports Moreton Bay's fisheries. While Moreton Bay only represents three percent of the Queensland coastline it produces 13% of the state's commercial fish catch and supports about 30% of Queensland's recreational effort. Recently the SEQ Regional Plan (2005) stated the commercial catch produced by Moreton Bay to be now 20% of the commercial fisheries catch for Queensland.

Mangroves also provide valuable coastal protection, visual amenity and supports a wide variety of species both on an ongoing and temporary basis. However, of these facts there is one simple fact we should always remember, if you want fish both for sport and dinner you need to fully protect mangroves.

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.

