

WILDLIFE DIARY

March 2015

Great Finds

Yellow-faced Whip Snake, *Demansia psammophis* out and about. With the weather still warm these beautiful reptiles are still out and about.

Mangroves

Individual mangrove species rarely occupy the entire tidal profile from mean sea level to the highest tide levels? Each species occupies a distinct part, defining its characteristic tidal position. Mangrove species have a special relationship with tidal inundation plus the frequency of wetting, and soil type. These influences commonly result in distinct bands of species ecotones that follow tidal contours, referred to as zonation.

Population

It is the growth in the human population that is now considered the greatest threat to seagrass - Short and

Wyllie-Echeverria, 1996.

Little bird with a big heart

A small bird with a big heart (figuratively speaking) is the Silvereye. See video: The Silvereye, ***Zosterops lateralis*** is mainly migratory, travelling large distances, particularly along Australia's east coast, where movements of up to 1600km have been recorded. Southern populations, especially 'lateralis', exhibit clear migratory patterns, regularly traversing Bass Strait in early autumn and extending as far as Rockhampton, Queensland, by May.

Birds heading North

Birds are on the move. The change in the season brought birds from the North and we are now seeing those same birds move North. Those like the Storm Birds - Common **Koel**, *Eudynamis scolopacea*, (eu, Gk, well,good; dynamis, Gk, power; orientalis, Latin, eastern) and the **Channel Billed Cuckoo**, *Scythrops novaehollandiae*. (*Scythros*, Gk, sullen faced) that arrived around September are now heading back to Indonesian islands of Sulawesi and the Moluccas and the Papua New Guinea mainland and islands of the Bismark Archipelago off its north eastern coast. Interesting to note that three subspecies are recognised: nominotypical *novaehollandiae* in subcoastal northern and eastern Australia, New Guinea and the Moluccas, *fordi* in Sulawesi and *schoddei* in the Bismarck Archipelago.

Did you Know?

Did you know approximately 3kg of tyre dust is produced by each vehicular tyre per year (Environmental Research Foundation, 1995; Councell et al, 2004) while zinc (Zn) release alone from tyre abrasion was calculated at 14gZn/km/yr on residential streets to 810 gZn/km/yr on highspeed motorways (Councell et al, 2004). Heavy metals like Zinc cannot be chemically transformed or destroyed and as Davis et al (2001) showed 25% of Zinc in urban stormwater was estimated to come from tyre wear and 73% from residential streets (University of Wisconsin, 2000), which included tyre wear. The concern is Zinc is known to be toxic to aquatic species (University of Wisconsin, 2000) and it's often found in stormwater (Councell et al, 2004).

Assuming there are two vehicles per each new household this represents an extra 3,744,000kg (3,744 tonnes) of tyre dust being generated annually in Brisbane and 504,000kg (504 tonnes) annually in the Redlands. Even using Atech Group (2001) more conservative figure of 0.03 g/km per tyre (1.06kg/vehicle/year) this still equates to 330,720kg (331 tonnes) of extra tyre dust generated by new dwellings in Brisbane by 2031 and likewise 44,520kg (44.5 tonnes) annually in the Redlands.

Great Walks



A great place to see winter migrating birds are the mangroves, riparian corridors and rainforest patches like those at Mt Cotton – now under threat from a Super Quarry.

Web Sites

WPSQ Coastal Community Science

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

History in two minutes

<http://marcbrecy.perso.neuf.fr/history.html>

Fish

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.

In Thornlands a suburb of the Redlands highlights many of these problems. Part of Thornlands is located within the upper catchment of Hilliards Creek previously an area devoid of extensive urban development. This creek system was identified by the Redland City Council for rehabilitation of native fish species under the proposed Fish 'n Creeks Project in 2009. Currently this area is being developed and when fully established it will support over 2000 dwellings (RCC, 2008). Prior to development the vehicle movement in this area is about 44 vehicle movements/hr during peak hour, when fully developed the vehicle movement will increase by 2,838% to 1,249 vehicles/hr. The consequence is that within the upper catchment of Hilliards Creek somewhere between 48,312kg (48 tonnes) and 4,267kg (4.3 tonnes) of extra tyre dust will be generated annually. Of this material 60% (28.8 – 2.58 tonnes annually) is toxic and it should be realized this is only one source of pollutant; some of the many pollutants created within the urban landscape.

Another consequence of urban sprawl is the radical alteration to our waterways. Within Australia, riverine connectivity has been disrupted through the installation of numerous instream fish passage barriers in the form of weirs, dams, road crossings, and floodgates. These barriers impact native fish populations by interrupting spawning and seasonal migrations, restricting access to essential habitat and food resources, and altering habitat condition and water quality.

Road crossings account for many of the barriers while pipe culverts and causeways also account for many of the impediments for this structure type.

Fish habitat rehabilitation

Fish habitat rehabilitation involves constructing fishways on barriers that prevent or delay fish migration to important upstream habitats. The removal of weed infestations is also an important rehabilitation tool used to restore important habitat values of wetlands. Barriers to fish passage include culverts, pipes, road crossings, weed chokes, weirs and dams. Barriers affect fish communities by preventing the movement of fish species which require free passage between aquatic environments to fulfil a number of key life stage requirements. This movement is essential for:

- maintaining populations of diadromous (migratory) species, which require free passage between freshwater and marine habitats for reproduction purposes.
- maintaining genetic diversity.
- the migration of adults to access habitats for feeding and reproduction purposes.
- the migration of juvenile fish species to reach upstream nursery habitats.

The rehabilitation of wetlands and maintenance of connectivity between freshwater and marine ecosystems has brought more fish back into these habitats, as well as other wildlife including birds and ducks. This has provided a great opportunity for recreational fishers and wildlife watchers. Source:

<http://www.environment.gov.au/node/24825>

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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