

WILDLIFE DIARY

October 2011



Great Finds

Richmond Birdwing Butterfly, *Ornithoptera richmondia* sighted and photographed at Thornlands. What a find!

The Storm birds have returned, **Channel-billed Cuckoo** *Scythrops novaehollandiae* and **Koel**, *Eudynamys scolopacea*.

White-bellied Sea-Eagle, *Haliaeetus leucogaster* seen carrying large carpet snake over Kinross Road.

POPULATION MATTERS

In his lengthy career, Sir David Attenborough has watched the human population more than double from 2.5 billion in 1950 to nearly seven billion. He reflects on the profound effects of this rapid growth, both on humans and the environment.

View video at:

<http://topdocumentaryfilms.com/how-many-people-can-live-on-planet-earth/>

Climate Watch

ClimateWatch was developed by Earthwatch with the Bureau of Meteorology and The University of Melbourne to understand how changes in temperature and rainfall are affecting the behaviour of Australia's plants and animals. The first project of its kind in the Southern Hemisphere, ClimateWatch enables every Australian to be involved in collecting and recording data that will help shape the country's scientific response to climate change. <http://www.climatewatch.org.au/>

How well has the media handled the climate change debate?

<http://www.abc.net.au/rn/bigideas/stories/2010/3057366.htm>

What's in flower

Native Frangipani, *Hymenosporum flavum* Foliage has beautiful, glossy deep green up to 15cm long leaves and flowers are formed in spring. Many trees are currently covered in sweetly fragrant and yellowy cream flowers which age to a deep orange.

Seagrass Watch blog

<http://seagrassmb.wordpress.com>

Did You Know?

Did you know hill-topping in butterflies is a very complex behaviour that often facilitates meeting of the sexes?

Hill-tops act as a focus for mating. Many butterfly species, especially in the families Hesperidae, Papilionidae and Lycaenidae appear to be obligatory hill-toppers and tend to congregate on hill or ridge tops that are usually higher than the surrounding countryside. The nature of the sites varies and a site may be as small as a few square metres or may cover several hectares, or display minor or very marked topographic relief. The same sites are used year after year, whilst apparently similar nearby sites may not be used.

Sites do not necessarily provide nectar food sources for the butterflies nor food plants for the next generation of caterpillars. Hill-top aggregations are essential for continuity of the reproductive cycle of some butterfly species, and hill-top sites may constitute vital focal points for such aggregations. The importance of hill-topping sites is out of proportion to their extent, so that a small area can be vital to the survival of species over a larger area. Hill-topping is often found in species which seasonally or habitually have low density populations and which have a greater need to facilitate male - female encounters, such as in the drier areas of NSW. Source: <http://www.environment.nsw.gov.au/determinations/hilltoppingktplisting.htm>



Great Walks

A good place to view butterflies is along our waterways. Surprisingly Blue Triangles, Blue Tigers, Common Crows, Evening Browns and Orchard Swallowtails are just some of the butterflies

that can be sighted along the vegetated areas of Tarradarrapin Creek, Indigiscapes and Coolwynpin Creek.

WWW

Super Quarry - it's back again

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

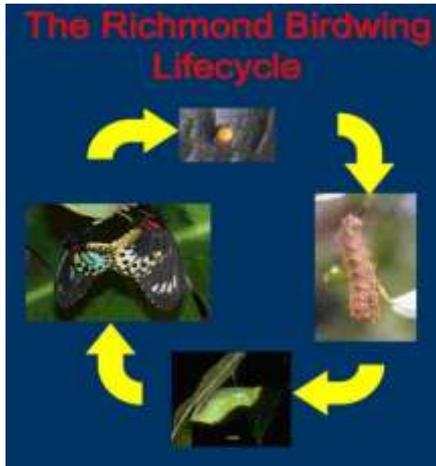
Richmond Birdwing Butterfly

<http://www.richmondbirdwing.org.au/index.php>

Richmond Birdwing Butterfly

The Richmond Birdwing Butterfly (*Ornithoptera richmondia*) is one of the largest butterflies found in South East Queensland and Northern New South Wales. This beautiful butterfly, the male of which has brilliant green and black wings and a bright red splash on its thorax, was once found in great numbers from the Mary River Heads in Queensland to the Clarence River in New South Wales and west to the Great Dividing Range.

Since the early 1900s, the range of the butterfly has become severely restricted. By the beginning of the 21st century, its distribution was reduced to two distinct populations, one on the Sunshine Coast and one stretching from the Gold Coast and its hinterland to the more northern parts of Northern New South Wales. Brisbane and its environs no longer has a stable and viable Richmond Birdwing Population, although sightings are more frequent in wet weather years encouraged by a frenzy of planting activities in the Brisbane suburbs over the last two decades.



The threats to the Richmond Birdwing Butterfly are both natural and man made.

Fragmentation of habitat

In earlier years the need for more and more farming land for dairying and in later years, small crops such as pineapples and other tropical fruits, led to the destruction of a significant amount of Richmond Birdwing habitat. In more recent years, the rapid rise in the need for residential land, much of which was on former farm land, has continued the degradation of birdwing habitat. With the rise in residential colonization, ignorance has led to further degradation. A misconceived perception that vines and trees do not belong together and that any vine is bad, has led to many landholders removing all vines growing on their properties, resulting in the subsequent destruction of much birdwing habitat. In any of our subtropical rainforests, vines form more than 50% of the forest canopy.

Education is slowly reversing this trend. The Double Helix Club, an initiative of CSIRO, the Richmond Birdwing Recovery Network and Richmond Birdwing Conservation Network, have been instrumental in reducing the decline in habitat, but still more has to be done.

In-breeding Depression

Habitat destruction and drought are two of the prime causes leading to another threat to the butterflies' survival - in-breeding depression. To understand this, one has to look at the biology and behaviour of the butterfly.

Richmond Birdwing Butterflies are not normally migratory. To maintain strong and viable populations, there must be plenty of opportunity for females to mate with non-related males. The female Richmond Birdwing butterfly is known to fly up to 30 kilometres from where she pupated in order to lay her eggs on suitable vines. Strong populations of birdwing butterflies ensure that there is enough genetic diversity in subsequent generations to ensure the species continues. Brother sister matings result in infertile eggs and the potential loss of a generation of butterflies.

Fragmentation has resulted in the isolation of many populations of butterflies. While an isolated population may initially be strong and viable, lengthy drought events, as there has been between the 1990s and 2008, has seen these populations dwindle in many cases to extinction. To bring the butterfly back to these areas, habitat corridors with large and numerous vines have to be established, linking existing strong populations with former areas where the butterflies are now extinct. This process can be hastened by the development of captive rearing programs and the release of genetically strong butterflies into areas facing extinction.

Dutchman's Pipe Vine

In the 1900s, the nursery industry, ignorant of many of the environmental issues, released onto the unsuspecting public, the vine *Aristolochia elegans*. This vine is commonly known as the Dutchman's pipe vine. Why? The flowers were showier, larger and more colourful than the native *Aristolochias* and *Paristolochias* of the local area. At the time and unbeknown to the nursery industry, these South American vines became devastating to the Richmond Birdwing larvae, causing 100% mortality in any birdwing larvae which hatched from eggs laid on these vines. Death occurred within the first 3 instars from poisoning. Furthermore, the female Richmond Birdwing Butterflies seemed to be attracted to, and prefer to lay their eggs on these dangerous vines. Sourced: <http://www.richmondbirdwing.org.au/index.php>

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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