

CAPE CHATTER

Nature Observations around The Cape

Issue No. 34

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The Damselfly is one of the colourful and magical terrestrial invertebrates that inhabit the wetlands at The Cape

The Cape is on the traditional land
of the Bunurong people

*"When we tug at a single thing in nature,
we find it attached to the rest of the
world..." John Muir*

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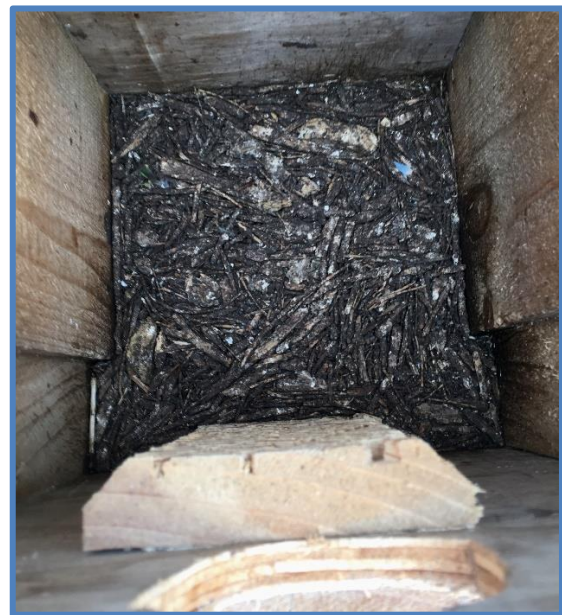
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Wanderings around the Wetlands ...

Tuesday 2nd February was **World Wetlands Day**, recognising the importance of these magnificent water bodies around the world and their importance, particularly the big 'Ramsar' wetlands, for migratory shorebirds, as vital breeding and feeding sites. Ramsar sites in Australia include the Coorong in South Australia, Eighty Mile beach in Broome and Moreton Bay in Queensland. With wetlands globally under increasing pressure from development, climate change and other threats, it is more important than ever to recognise the value of these unique ecosystems, big and small. So, this issue, the focus is on the wonderful small, constructed wetlands at **The Cape**, the important role they play in 'our' local ecosystem and what fauna and flora has been observed in the short time since they were built.

But first - what was in the nesting box???

Last Monday, we checked the *Eastern Rosella* nesting box after the birds vacated it late January. We did not know what to expect! However, based on observations since November, we are certain there was a fledgling (or two) as there were no unhatched eggs, dead hatchlings, or eggshells – all good signs. We still have not seen any juvenile birds near the tree stag as we would expect, but the adults have still been seen flying into the nearby coastal bush occasionally.



As the *Rosellas* fly off into the sunset, we hope to see them back again next breeding season for another wonderful experience.



The wonderful wetlands of The Cape – the ‘kidneys’ of our ecosystem?

The way I view the wetlands at **The Cape** is that not only are they interesting flora and fauna habitats to sit by quietly and watch the world go by, they are performing a very important hydrological function as well. I think of them as ‘closed loop/feedback’ water harvesting and filtration systems. They are key features of the sustainable, ecological design of **The Cape**.



There is an important relationship between the various habitats of the estate and water which I have tried to show in this series of habitat pictures above. In KISS (**Keep It Simple Stupid**) terms it goes like this: in our home gardens, water transpires from our plants and some of the excess from rain flows into the verges/swales along with water from hard surfaces of the streetscapes; the water in the swales flows into the creeklines/drainage lines connected to the wetlands; excess water is released into the swamps/wetlands within the Coastal Reserve; and finally, there is an occasional flushing out of the water into the ocean where it evaporates and condenses to create precipitation, starting the whole process over again. Not only is it a ‘water cycle’, but each component is providing vital habitat. The wetlands could be considered the ‘kidneys’ of this water harvesting system in **The Cape** – a simple, natural healthy ecosystem!

The Cape Constructed Wetlands – Something from Nothing



We have an amazing opportunity to observe and monitor the constructed wetlands in **The Cape** because we are starting with a blank canvas – we can see how an ecosystem evolves from nothing. It is one of the reasons why I started *Cape Chatter* to record and share the observations over time.

Think about this - two years ago our wetlands were no more than low-lying/depressions of degraded pasture land. In the first months of 2019, two wetland complexes were constructed: one in the south east with two connected ponds and a larger one in the south central area with four ponds. On 10 May 2019, a significant weather event (hail and heavy rain) filled the

wetlands within a couple of hours! Over the next few months, the wetlands were landscaped and planted out with a range of wetland plantings. Within 14 months, the ecosystem had started to take shape... and is still continuing to boom with plants and animals popping up all the time.

In the beginning ...



Above: The large central wetlands filled on 10 May 2019



Above: The wetlands in July 2020

The Flora of the Wetlands

Now I am an amateur when it comes to things relating to water plants, but I am slowly learning what is what and as the ecosystem develops, I will write more about it in *Cape Chatter* with the help of experts. What I am learning is that it is just not a mass planting of reeds in some water!

Wetland plantings comprise a series of levels/layers and plant variety to combat the effects of pulsing water levels, waterbird grazing, turbidity, and sedimentation. Planting comprises ephemeral batter plants and shallow, deep, and submerged marsh plantings. So, in that thick wall of vegetation, there are: *Sedge & Rush* in the ephemeral layer; *Rush* in the shallow marsh; *Rush and Water Ribbons* in the deep marsh and plants like *Blunt Pondweed* and *Upright Water-milfoil* in the submerged layer.

Many of these plants have important filtration roles and assist in microbial activity in the water along with providing food, protection and breeding habitat for many animals. These plants once provided food and material for our First Nations people. For example, the leaves of *Tall Sedge* (*Carex appressa*) were used in basket making, as were the stems of *Basket Sedge* (*Carex tereticaulis*). *Spiny Headed Matt-Rush* (*Lomandra longifolia*) seed was ground into flour.

Water Ribbons (Cycnogeton procerum)

I love the *Water Ribbons* plant - easily identified as it is the one seen under netting until they are established because it is very popular with water birds. It is planted in the shallow or deep marsh layer (in water).



Above: The leaves and flower spike of *Water Ribbons*. The roots were an important source of carbohydrate for indigenous people. It is an excellent plant for birds and frogs.



Below: Close up of the lovely flower spike of *Water Ribbons*.

Unwelcome flora residents ...

The wetland plantings and species placement have been carefully researched and designed. Occasionally, some unwanted visitors appear which can overtake and dominate the ecosystem if not kept in check. One such plant is the introduced *Cumbungi* (Thypha or Bull Rush) pictured below.



It is spread by waterbirds. It is easily recognised by furry brown flowers on an upright stem. Please let the team at **The Cape** know if you see it so they can take action to eradicate it.

Welcome flora residents ...

While most of the species in the wetlands have been planted by hand, nature plays a role as well. Recently I noticed what looked like pink-tinged asparagus poking its head out of the water.



A check with our 'local wetland authority' identified this as *Blunt Pondweed* (*Potamogeton ochreatus*), an indigenous, submerged perennial herb which would have been carried in on the feathers of waterbirds. It was not planted by hand. It is a good food plant for waterbirds as well as habitat for water fauna. It is also good for water quality as it has the biofilms of beneficial bacteria that gobble up surplus nutrients that occur in stormwater. Another example of our birds spreading indigenous vegetation - like *Little Ravens* and *Leucopogon*!

The Fauna of the Wetlands

The role of waterbirds in helping build the ecosystem provides a nice transition into the fauna we have seen in the wetlands since their construction in 2019.

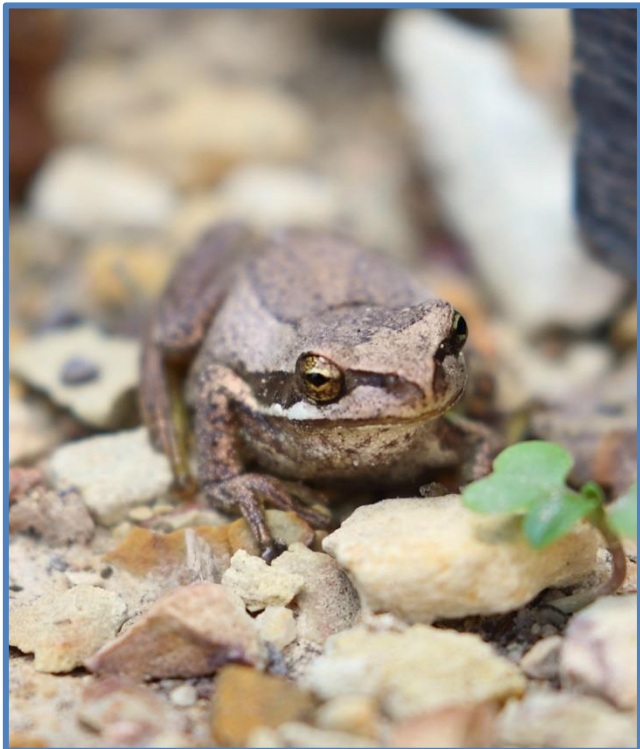
Like the plants, I have little idea what tiny aquatic fauna lives within the water but I know there is a whole new world of life at that level. Even amongst the *invertebrates*, the mind boggles at what is flying about. So I will start at the lowest level of the food chain that I have been able to photograph, and that would be the most obvious – the magical *Damselfly* and *Dragonfly*!



There are times in the wetlands when these beautiful creatures dance all about you ... you just have to pause and watch in awe at their colour and behaviour as they fly from reed to reed, hanging on to stems with a vice-like grip by their delicate legs. (On a recent Snipe survey, we "lost" fellow counter Helen Temple as she was mesmerised by our Damselfly wonderland – we found and saved her eventually!!)

Think wetlands and I think *frogs*. I have written quite a bit in *Chatter* about the chorus of frog calls we hear during the year and all that noise points to a very healthy ecosystem at work. To date, we have identified seven (7) frog species within **The Cape**.

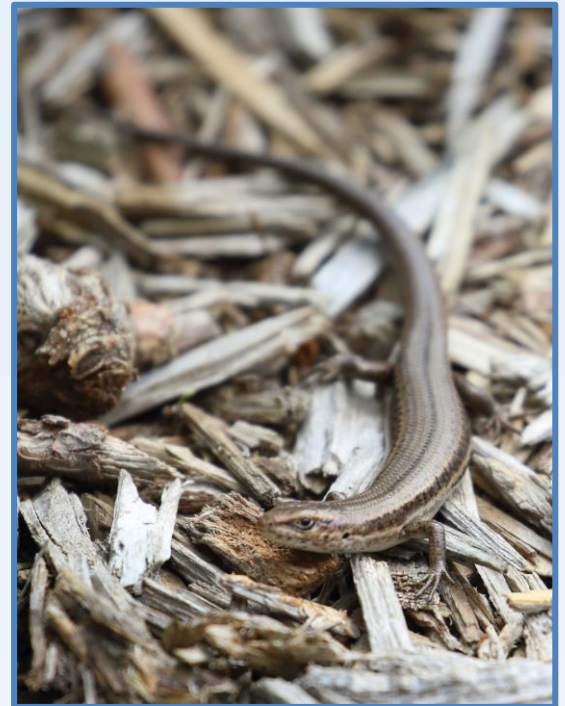
Frog species include: *Eastern Banjo Frog*, *Brown Striped Frog*, *Common Eastern Froglet*, *Victoria Frog*, *Verreaux's Frog*, *Brown Tree Frog* and *Spotted Marsh Frog*. There are 12 suggested species for our area according to **Frog ID**. If you identify any new species please let me know so I can add them to our list!



Think frogs and wetlands ... and yes, we have snakes. We have a small population of *Lowland Copperheads* in and around the wetlands over summer and they are seen most days 'sunning' in their favourite haunts.



We are also starting to see a number of skinks appearing, especially the *Garden* and *Water Skink*.

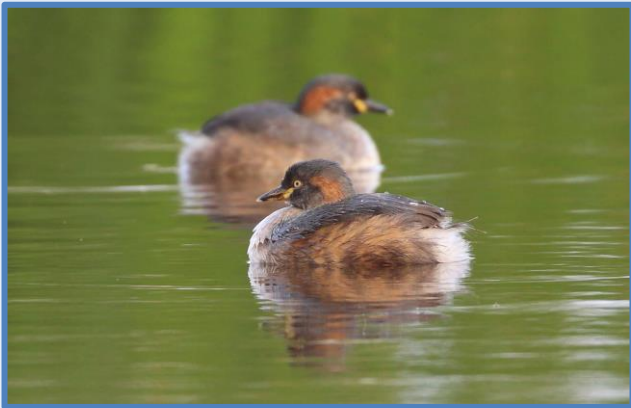


And to top it all off, we have the fantastic birdlife feeding off these smaller animals in the wetlands.

To date, we have observed 17 species classified as **freshwater** birds along with 14 other species that have been observed using or inhabiting this ecosystem regularly. That is 30% of the indigenous bird species identified to date at **The Cape**. Not a bad effort for 18 months of development!

The birds of the wetlands ...

The more common **freshwater** bird species regularly seen include: **Teal** (*Chestnut*, *Grey*), **Duck** (*Pacific Black*, *Australian Wood*), **Grebe** (*Australasian*, *Hoary-Headed*), **Ibis** (*Australian White*, *Straw-necked*), and **Heron** (*White-faced*, *White-necked*).



Australasian Grebe pair



Pacific Black Duck



Grey Teal pair

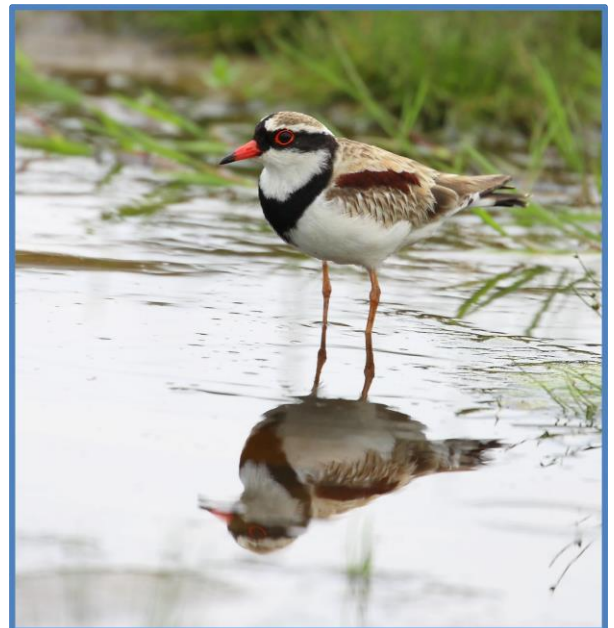
We have had successful breeding of Pacific Blacks and both Teal species in the wetlands since construction.

Our first waterfowl was seen last weekend. A family of four *Dusky Moorhen* (2 adults and 2 juveniles) were observed in the large central wetland.

Less common sightings include near-threatened *Australasian Shoveler*, *Cattle Egret* and the vulnerable *Royal Spoonbill* pictured below.



Some of the birds classified as “**coastal**” birds who regularly use the wetlands include *Little Pied* and *Pied Cormorant*, *Black-fronted Dotterel*, *Masked Lapwing* and of course the migratory and vulnerable *Latham’s Snipe*.



Black-fronted Dotterel

“Land” birds visiting the wetlands include raptors (particularly the *Whistling Kite* and *Black-shouldered Kite*), *Welcome Swallow* in their hundreds in the breeding season, and with the wetland plants in flower over summer, there has been an influx of *Silvereye*, *Yellow-faced Honeyeater*, along with *Willie Wagtail*, *Crested Pigeon*, *Little Raven*, *Australian Magpie* and *Magpie Lark* on the sidelines.



Yellow-faced Honeyeater amongst the reeds



Welcome Swallow ‘sweeping’ over the wetland.



Whistling Kite – ever watchful for small prey

But by far the biggest success story, for me anyway, is the appearance of the *Little Grassbird*, a rather inconspicuous, hard to see, small brown bird with a beautiful waling/whistling call. This species is a recent arrival in the large central wetlands, and I am hoping it will colonise and become a permanent resident (we have seen it mating and there are several birds about now).



Along with the *Australian Reed Warbler* (seen once) we keep the fingers crossed that we see more small wetland bird species arrive to call the wetlands home.

So ... I think our wetlands are developing into a wonderful ecosystem providing water and flora habitat beneficial for amazing native fauna of all shapes and sizes and helping our environment.

Next time you have the opportunity to wander by a wetland, just pause for a moment or two (even better if you have more time) and take it all in. Listen to and observe how a healthy ecosystem is working to help fix our polluted world. You will be surprised what you may hear and see – and it is good for the soul! Oh ... and if you see any rubbish, please pick it up ... that is good for the soul as well. Plastics and rubbish follow water very well. **Clean Up Australia** and **Take 3 for the Sea**. <https://www.take3.org/>