



THE OVERWINTERING PROJECT: *MAPPING SANCTUARY*

SERAG is very pleased to support The Overwintering Project.

The Project website explains: *The Overwintering Project is an environmental art project inviting artists to visit, research, and respond to the unique nature of their local migratory shorebird habitat.*



The Project's primary aim is to bring visibility to Australia's most endangered group of birds, our migratory shorebirds, and their habitat.

Australia has 36 species of migratory shorebirds that breed above the Arctic Circle in Siberia and Alaska, migrating south to spend the major part of their migratory cycle (October – May) on the shores of Australia and New Zealand. The route they fly annually between their two homes is called the East Asian-Australasian Flyway.

They travel this 25,000km circuit every year of their adult lives.

The Overwintering Project aims to raise awareness of migratory shorebirds – their existence and their needs – to help us do our part to preserve these extraordinary creatures.

This project is endorsed by BirdLife Australia and by the East Asian-Australasian Flyway Partnership.

It is instigated and co-ordinated by Melbourne-based artist, Kate Gorrington-Smith.

OVERWINTERING: *SUMMER ON THE SWAN*



Cath de Little *Going, going....*

Migratory shorebirds contribute intrinsically to the wonder and natural heritage values of the Swan River, having summered on the Estuary for millennia.

As the Swan Estuary Marine Park provides vital feeding and resting grounds for these long haul and intrepid travellers, SERAG is collaborating closely with the Printmakers Association of Western Australia in response to Kate's vision, drawing attention to these endangered birds through *Summer on the Swan*.

During the course of the year a series of opportunities will be provided for artists and the wider community to deepen their understanding of migratory shorebirds and the habitat afforded, conserved and protected at Alfred Cove, Milyu and Pelican Point.

These will include displays, workshops, talks and guided tours.

Summer on the Swan will be launched to celebrate World Migratory Bird Day 2019, and will culminate a year later with an exhibition of works by local artists.

INTREPID TRAVELLERS

SERAG member Cath de Little's lovely etching (above) is of Bar-tailed Godwits (*Limosa lapponica*) near her home in Tasmania.

According to BirdLife Australia, Bar-tailed Godwits are the world record holders for non-stop flight: they have been recorded travelling 11,000km from Alaska to New Zealand in only 8 days, flying at an average of more than 50km/h.

While two species of Godwit still visit the Swan River Estuary, their numbers have plummeted due to loss of habitat. Among other migratory shorebirds we are still privileged to see, the Grey Plover is the first to arrive (and in breeding plumage), and the last to leave. Small numbers of others come too, including Red-necked Stints, Greenshanks, Sharp-tailed Sandpipers and Great Knots.

They and their habitats are in urgent need of our care.

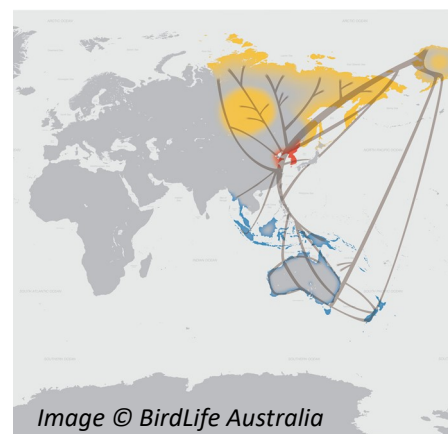


Image © BirdLife Australia

BUFFERS TO STORMSURGES AND HIGH TIDES

The need to respond effectively to high tides and storm surges is a growing issue along the margins of the Swan Estuary Marine Park - at Milyu, at Alfred Cove and at Pelican Point.

The narrowness of the riparian margin and ecological buffer supporting the Swan Estuary Marine Park at Alfred Cove is well illustrated by this photograph, taken in June at the western end of the Attadale foreshore.

In this spot there is less than a meter of A-Class Nature Reserve remaining, and the Park's protective fence and a walkway close to the water's edge at great risk of being undermined.

Walling or other form of hard-edge is not an option at this sensitive site.

As has been shown in other parts of the Estuary, by 'scouring', sea-walls will irretrievably alter the nature of the shoreline, impacting on a rich diversity of aquatic and riparian flora and fauna.

The soil substrate is habitat for benthic flora and fauna that are important as food for waterbirds and fish.

Changes to the hydrology of the Marine Park will affect wading birds by altering prey availability. Water depth is also of enormous importance to these species - their varying length of beak and leg determining suitable foraging areas.

Difficult at Milyu and Pelican Point due to major infrastructure, there is the capacity to widen the riparian margin along much of the foreshore at Alfred Cove. Widening the vegetation buffer will allow two processes to work more effectively - *wave attenuation* and *shoreline stabilization* - cushioning wave impacts and strengthening embankments.

As we come to grips with the impact of climate change on the River's precious natural and cultural heritage values, widening the vegetation buffer will also help prepare for and mitigate the possible need for managed retreat.



Photograph courtesy M Crow

BATTLING EROSION ON THE TROY PARK FORESHORE

As the River tries to restore its ancient floodplain, and as storm surges grow in frequency and intensity, the infill used to create Troy Park is washed away, destabilizing embankments and undermining fencing.

Extensive plantings have been used to mitigate erosion pressures on its narrow, steep artificial embankments.

Lepidosperma gladiatum has been planted on the eroding embankment of the A-Class Nature Reserve, directly opposite the main playing field, and saplings of *Melaleuca raphiophylla* and *Eucalyptus rudis* have been planted to replace mature *Casuarina obesa* poisoned by a local resident seeking 'views' a little further along.

The coir logs we have installed as a 'soft' strategy to counter erosion near Haig Road have been battered but have nevertheless helped protect the thin line of trees on that part of the foreshore. They must be continually replaced however, as there is no fall-back vegetation if they are lost.



Photograph courtesy C O'Neill

METRES OF BEACH LOST AT PELICAN POINT

We are extremely concerned with the continuing level of beach erosion taking place along the eastern terrestrial margin of Pelican Point.

When SERAG formed in 2010, the protective fence adjacent to the small groyne included two more panels of wire extending over beach sand. It seems it won't be long until the panel shown is lost too.

It would be a great tragedy if the lagoon that forms one of the Estuary's last remaining areas of coastal saltmarsh were eventually to be affected.

This threatened ecological community supports so much of the River's native fauna, including birdlife.



Photograph courtesy T Graham-Taylor

AMENITY LIMITED BY URBAN HEAT ISLAND EFFECT

Once covered with sedgebanks and melaleuca/eucalypt forest, much of the southern bank of the Swan Estuary Marine Park around Attadale, Alfred Cove and Applecross has been in-filled by rubbish tips and building rubble, then covered with kikuyu. In some cases the areas have been used for sports fields, but in others simply left as broad graceless expanses of kikuyu.

As users of the Attadale dog-exercise area know, this extensive part of the foreshore is generally avoided in summer between around 9.30am and 6.00pm, due to extreme heat.

Despite being part of Bush Forever Site 331 and adjacent to the River, the Attadale foreshore is largely devoid of trees to moderate conditions. The three or four trees that exist are species that provide only the thinnest of shade to the hopeful benches below.

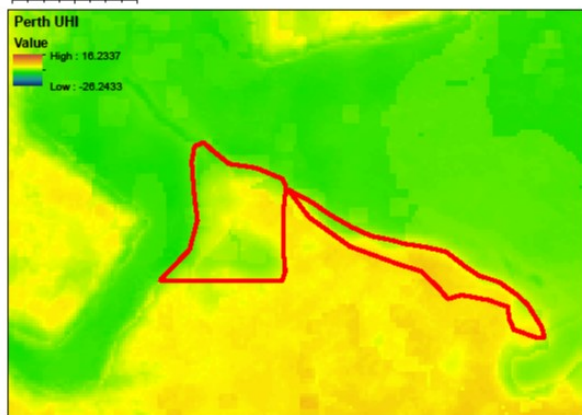
A tree's canopy acts like a parasol, its leaves blocking out, absorbing and dissipating much of the sun's radiation - cooling air and land by several degrees. They also buffer wind.

Without appropriate trees, the heat falling on the Attadale foreshore is reflected by the kikuyu, making the place an unnecessary hotspot, limiting its use to only the hardiest, most desperate of dog-owners.

Rare public open space adjacent to the River should be optimally available for the enjoyment of the community. With the potential to provide *enormous* public amenity and health benefits, people's well-being would be enhanced by reconsidering the landscaping of such expanses to include trees and converting drains to 'living streams'.

This would not only reduce heat and soften conditions for greater community access and enjoyment, but also improve the site's visual landscape values and the health of the Swan Estuary Marine Park and A-Class Nature Reserve.

Trees are wonderfully effective at improving the microclimates of urban areas, making them more livable. Landscaping with trees is an effective and efficient way to adapt to even higher temperatures associated with climate change.



Imagery courtesy CSIRO

NATIONAL TREE DAY

We celebrated National Tree Day by planting a lovely *Melaleuca raphiophylla* in a small patch of remnant dampland on the Attadale foreshore.

This small tree is commonly known as a swamp paperbark and is endemic to the south west of Western Australia. Its beautiful soft needle-like foliage and white bottlebrush flowers provide wonderful habitat for native fauna.

Sadly in many places it is under pressure due to a drying and warming climate.



Photograph courtesy C O'Neill

COMMUNITY RIVERCARE



Our work on the Attadale foreshore continues into its second year, supported by a DBCA Community Rivercare Grant.

A major and difficult task undertaken by SERAG volunteers is the manual removal of a very challenging sedge - *Juncus acutus*. In this we have been assisted by teams from Curtin University and Conservation Volunteers Australia.

Over the last few years *Juncus acutus* has spread significantly, now growing thickly along an extensive margin and possibly hybridizing with a native relative, *Juncus kraussii*.

Photographs courtesy C O'Neill

TOMPKINS PARK PROGRESS

Restoration efforts towards the eastern end of Tompkins Park are progressing well. Last year's plantings survived the harsh summer and look very strong and healthy after winter rains - and the site has been able to withstand the erosive pressures of winter storms.

The City of Melville's installation of gross pollutant traps on three of the drains in the vicinity is warmly welcomed, as they will remove rubbish from storm-water entering the Swan Estuary Marine Park, thus improving Estuary health.



Photographs courtesy M Matassa & C O'Neill

Currently, with the support of an NRM grant, we are concentrating on continued weed-removal and infill planting to strengthen the resilience of this narrow riparian margin.

As well as tackling winter weeds, a large outbreak of *Carex divisa* is finally being removed, using a combination of solarisation, hand-weeding and careful herbicide treatment.

The insidious weed is being replaced by native sedges and shrubs - principally *Juncus kraussii* in wet areas, *Gahnia trifida* in the damp zone and *Ficinia nodosa* and *Rhagodia baccata* on the dry artificial embankment.

JUST OFF-SHORE

Our volunteers are often diverted from their repetitive task by wonderful sights in the Swan Estuary Marine Park.

Recently, early morning weeders working along the eastern end of Tompkins Park were very impressed by the skill of three dolphin, cooperatively herding to breakfast on a school of unfortunate fish.

Some pelicans soon flew in to take advantage of the situation and mop up the spoils.

Similarly, a week or so later, a raft of Hoary-headed Grebes (*Poliocephalus poliocephalus*) was observed off-shore at the same spot.

These are deep divers, feeding mainly on aquatic arthropods.

During the breeding season the adult of this fairly small dark grey and white grebe develops white streaks over its entire head - hence its common name.

Photographs courtesy M Matassa & C O'Neill



A LITTLE DIFFICULT TO SEE?

A beautifully camouflaged Buff-banded Rail (*Gallirallus philippensis*) was recently sighted in our recovery site at the eastern end of Tompkins Park.

Indeed, it was rather boldly exploring where we were weeding and planting, in the hope of finding a tasty morsel of food uncovered by our work.

The Buff-banded Rail is a medium-sized stout rail with short legs. It has a distinctive grey eyebrow and an orange-brown band on its streaked breast.

It walks slowly, with tail raised and flicking constantly.

Once thought to be lost to the Alfred Cove area it is encouraging to see this wonderful resident of dense reed-banks and other vegetation bordering wetlands once again foraging on the margin of the Swan Estuary Marine Park.

Photograph courtesy C O'Neill



WELCOMED AT PELICAN POINT



Photograph courtesy Perth NRM

A tough job was made light not only by the natural beauty of the site but also by the marvellous experience of working among many hundreds of Welcome Swallows (*Hirundo neoxena*) circling in, out and around the team, chasing insects disturbed by our work.

It seemed possible - if you were quick enough - to simply reach out and catch one. But no-one would come remotely near to matching these little birds' speed and agility!

An enormous pile of pelargonium was gathered.

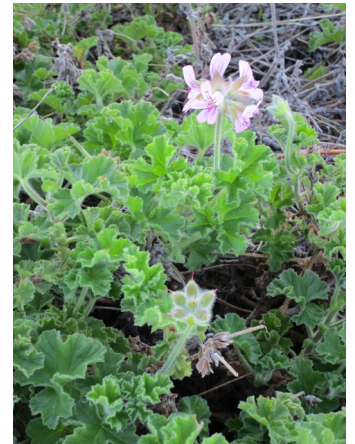


ANOTHER GARDEN ESCAPEE

Rose Pelargonium (*Pelargonium capitatum*) is a shrubby, softly hairy perennial with broad almost circular leaves which are irregularly, quite deeply lobed. When its soft stems are damaged, glandular hairs release essential oils, the scent of which is the source of its popular name.

It is easily propagated from seed or cuttings and left untended it becomes a spreading/straggly plant, which can grow to around a meter high and 1.5 meters across. It flowers from July to October with pink to mauve flowers with darker markings, which have little, if any, perfume.

Originally from South Africa and introduced as a garden plant, gene source and for medicinal purposes, it has 'escaped' to become a significant weed in urban coastal heathland and Banksia and Tuart woodland - including on margins of the Swan Estuary Marine Park.



Photographs courtesy C O'Neill

MELALEUCA SAPLINGS PLANTED

As well as tackling a new site identified for restoration through our latest SALP Project, this year we have completed infill planting in previous focus areas where a higher density of under-storey is required.

With the help of the fabulous *UWA@PP* team, we are also preparing the site recently affected by fire for a mass planting of seedlings next year.

In total, twenty *Melaleuca raphiophylla* saplings and a mature *Eucalyptus rudis* have been planted to quickly replace trees inadvertently destroyed by the crew managing the blaze. Weeds have also been removed, including the suckers of *Casuarina glauca* trees steadily encroaching on the site.



Photographs courtesy Yvonne Ching Ying Fong

A 'FAIRY FOREST' OF FUNGI

Numerous species of fungi emerged during the wet season in Bush Forever Site 402. Among them was this beautiful and extensive 'forest' of tiny mushrooms, each only a few centimetres in size.

Fungi perform an essential role in the decomposition of organic matter and have fundamental roles in nutrient cycling and exchange in the environment.

Photograph courtesy Yvonne Ching Ying Fong



PLANTING AT MILYU

Despite access difficulties, SERAG has supported two successful planting sessions at Milyu, organized by DBCA.

In early July a team of hardy people braved extremely stormy weather to plant in Milyu's dryland areas, then in mid-August students from Curtin University joined SERAG volunteers for some additional work with wetland species.



Photographs courtesy R Napier & C O'Neill

A NEW CHALLENGE

A generous donation from a community member has facilitated a new project of weed-management in a very important and sensitive area of Alfred Cove.

A survey of the site has provided useful information that will form the basis of on-going work. Where enormous swathes of *Typha orientalis* and kikuyu were removed and replaced around ten years ago, new priority weeds have emerged to challenge native vegetation - and thus the ecological health of the site.

While we are steadily getting on top of seasonal weeds, kikuyu, couch and pampas grass have posed on-going difficulties - repeated treatments simply masking these resilient problems.

We will now tackle all the weeds identified, including onslaughts of *Carex divisa*, nut grass and paspalum.



Weeds identified in the July survey Screen shots courtesy T Heckler



FOR YOUR SEPTEMBER CALENDAR

- TREEmendous Tuesdays: Alfred Cove 7.00am - 9.00am
- 12 (Thur) CV! Alfred Cove 9.30am - 12.00noon
- 14 (Sat) UWA@PP Pelican Point 8.30am - 10.30am
- 22 (Sun) World Rivers Day with Murdoch 8.30am - 10.30am
- 25 (Wed) Corporate Bushcare Pelican Point
- 26 (Thur) CV! Alfred Cove 9.30—12.00noon
- 28 Saturday Morning at the Cove 8.00am - 10.00am

Please contact SERAG to register your interest and for further details.

Notice is given of our
Annual General Meeting
6.00pm Wednesday 23rd October 2019
Please also note our new email address:
swanestuarygroup@gmail.com



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