# .... about the Estuary



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#### SATURDAY MORNING AT THE COVE

A regular task for our Saturday Morning at the Cove team is monitoring the impact of erosion on the River foreshore.

The challenges associated with Climate Change are already evident, with intensified storm surges battering the very narrow strip of riparian vegetation remaining along the Marine Park at Alfred Cove and undercutting the few trees holding the embankments and providing a corridor of natural habitat along the Estuary.

While the corridor desperately needs to be widened to bolster the riparian margin, so far our trials of 'soft' erosion-mitigation techniques at particularly vulnerable spots in Alfred Cove are showing positive results. The coir rolls we installed a few years ago have lessened the impact of wave activity on the shoreline, allowing river soil to build up behind them and sedge-banks to strengthen.

Encouraged, we have recently replaced those rolls that have themselves worn away.

After a couple of hours of foreshore work we always select a beautiful spot from which we can quietly and unobtrusively observe the many 'reasons' for our exertions. Often, while we enjoy our coffee and cake, feathered residents and river dolphin pass by our company, foraging for their preferred snacks.

These wonderful creatures and the fragile riparian and aquatic habitats on which they depend are certainly worth protecting - and it is a joy for us all to contribute positively to their future well-being.

Please contact SERAG if you would like to participate in this monthly event.



An Egret passes by Photograph courtesy M Matassa

#### TAMBOOKIE ETALAT PELICAN POINT

Tambookie Grass (Hyparrhenia hirta) was introduced into Australia principally for pasture and animal fodder. Since then it has rapidly become a challenging environmental weed.

It can be easily distinguished from other grasses by its grey-green leaves.

Once established, Tambookie develops into very thick, large tussocks growing to approximately 1 metre high. By then it is extremely difficult to manage and requires a sustained control program integrating a number of different methods.

Recently volunteers from CVA, Apple Computing and UWA have assisted SERAG in the laborious task of removing by hand large swathes of Tambookie and some sapling Casuarina glauca from Pelican Point. The site is also heavily impacted by other weeds, including Victorian Tea Tree, Veldt Grass and Watsonia.

Amazingly, in amongst it all, we found numerous Jacksonia seedlings struggling to compete.

Tambookie's seed-bank fortunately begins to deteriorate after two years, so our perseverance in hand-weeding should enable the Jacksonia and other native species to flourish.

A much-appreciated grant from the Swan Alcoa Landcare Program will enable additional restoration efforts at this particular part of Pelican Point over the forthcoming months.





Tambookie at Pelican Point Photographs courtesy C O'Neill & T Doehring

#### CLEAN UP AUSTRALIA DAY

Despite a forecast temperature of a very hot 37 degrees, thirty-three people participated in SERAG's *Clean Up Australia Day* event at Pelican Point.

Around 33 kilograms of litter were collected in one hour, amounting to three full bags of recyclable material and four of general litter, averaging one kilogram per person!

Ten males and twenty-three females participated, their ages ranging from thirteen to eighty-one years. Volunteers included SERAG members, students who regularly come along to our monthly *UWA@PP*, and people from the wider community who had registered through the Clean Up Australia website.



Photograph courtesy C O'Neill

Some Code Green members also joined in.

This group is an initiative of the Western Australian Medical Students Society (WAMSS) and *Interhealth*, the Global Health Group for WAMSS. Its goals include: *'Educating* medical students about the effects of climate change on health and what they can do to help; *Going Green* and reducing the pollution of WAMSS and the health sector at large, and *Empowering* medical students to stand up and be a voice on climate change and advocate for action'.

Code Green provides a platform upon which medical students and doctors can educate, engage and inspire colleagues and the wider community to act now to prevent the worst health consequences of climate change.



#### THREATS TO SWAN RIVER DOLPHIN

The Swan River's much-loved community of Indo-Pacific bottlenose dolphins comprises approximately twenty to twenty-five dolphins, including several adult females with dependent calves, one or two 'alliances' of tightly-bonded adult males, and a large group of sociable youngsters.

The River Guardians' *Dolphin Watch* project recognises the importance of dolphins as potential indicators of river health and aims to provide better understanding of dolphin ecology and their interactions with human activities. As each dolphin can be identified by the distinctive shape of and marks on its dorsal fin, an identification chart has been developed, greatly assisting volunteers in recording sightings and behaviours of individual mammals.

Threats to dolphins include: entanglement in discarded fishing line; health impacts of contaminants; loss of habitat and declines in food species; poor water quality from nutrient contamination; toxic algal blooms; disturbance from boat traffic; excessive underwater noise, and people illegally feeding dolphins, leading to boat strike or entanglement.

While we seem a little more aware of the dangers of discarded lines, reporter Daniel Mercer raised considerable community alarm relating to the second of the above threats. In an article in *Perth Now* (March 9 2017) he wrote:

'Dead Swan River dolphins have been found riddled with toxic pollutants that have been linked with cancer and are restricted in some countries and several Australian States.....

At issue are chemicals known as perfluorinated compounds, or PFCs, found in a number of Swan River dolphins at the highest levels recorded in Australia. The long-lived compounds, commonly used in firefighting foams, have been banned or restricted elsewhere amid fears they could be carcinogenic.

They were discovered in the Swan River dolphins after tissue samples from the animals were sent to South Australia last year as part of an inquiry into the deaths of dolphins in the State. Previously undisclosed correspondence shows the Swan River dolphins had the highest levels of PFCs in the country - up to 100 times higher than dolphins from Bunbury.

Potential sources of the pollutants included a drain near Perth Airport that flows into the Swan River, along with Pearce Airbase via Ellen Brook.

In South Australia, regulators have warned high doses of PFCs may suppress the immune systems of affected animals and they should be limited to 'essential use' only.'

We trust our regulators will respond similarly to reduce this threat to one of the Swan Canning Riverpark's most iconic species.



#### MELVILLE COUNCIL APPROVES WAVEPARK

Just a few years ago - in May 2011 at the Swan Canning Policy Forum - the 'Priority Plan for Investment in the Swan Canning Catchment' was developed wherein twenty-two local governments agreed:

'The Swan Canning Estuary has been identified as a coastal 'hot spot' by the Australian Government. A coastal hotspot is defined as an area that encompasses one or more matters of national significance as defined under the Environment Protection and Biodiversity Act (1999); is under pressure as a result of population growth and development, disturbance of acid sulphate soils, and water quality decline, and is suffering ecosystem disturbance leading to habitat loss and biodiversity decline.

The Swan Canning Estuary is recognized as an area of national environmental significance under threat but is not currently being managed to national standards. Local Governments in the metropolitan area united to take leadership on this issue and investigate opportunities to improve the health and condition of this nationally significant catchment which is home to more than 70 per cent of WA's population.

The Western Australian Local Government Association (WALGA) Swan Canning Policy Forum was developed because of members' concerns about continuing water quality decline and asset degradation in and along the Swan and Canning Rivers. The health of the rivers and wetlands in the Swan Canning catchment is fundamental to the health and wellbeing of the Perth community, regardless of how close they live to the rivers. The Swan Canning river system adds enormous value to the urban landscape because of its ecological, social, cultural (including Indigenous) and amenity qualities. In essence, the river system is the defining feature of Perth.

The Objective was to recommend a preferred funding mechanism and institutional arrangements that will result in:

- Improved water quality in the rivers, waterways and groundwater
- Improved condition of built and natural foreshore areas through implementation of best practice
- Improved stormwater management to best practice standards
- Increased community awareness about the water quality issues in the catchment
- Behaviour change influenced to reduce nutrients and contaminants reaching waterways
- Water quality considerations integrated into land-use planning processes
- Current and future development maintaining or improving water quality
- Increased trust, collaboration and understanding between key stakeholders
- Improved river resilience to manage climate change impacts
- Clarity on the roles and responsibilities of relevant stakeholders.'

Therefore it is disappointing that, by approving a massive artificial wave park development on its shores, the Melville Council has chosen to put at risk the exceptional ecological and cultural values of the Swan River Estuary at Alfred Cove. Along with thousands of others in the community, SERAG hopes that the next level of decision-makers will recognize that the proposal is inappropriate for such a significant and sensitive site - and reject it.

#### STORM WATER MANAGEMENT

World Water Day was held on March 22, focusing this year on wastewater. The *Why Wastewater* campaign highlighted the need to reduce, reuse and generally better-manage wastewater, in turn improving the water-cycle to benefit every living thing.

Storm water management is a complex issue, involving diverse authorities.

SERAG is concerned that a significant number of drains carry waste storm water - with all the contaminants, pollutants and nutrients collected from an increasingly urbanised landscape - directly into the Swan Canning River System where native marine life is adversely affected.

Hence, over the past year one of our projects has focused on cleaning up what has been a smelly and dangerous drain on the Attadale foreshore.

By ridding it of choking weeds and litter and by planting filtering vegetation we hope to improve the quality of water entering the Swan Estuary Marine Park from this source at least, and consequently improve ecosystem health.



Photograph courtesy C O'Neill



#### WORLD MIGRATORY BIRD DAY

May 10 was World Migratory Bird Day.

This year's theme was *Their Future is our Future - A healthy* planet for migratory birds and people, drawing attention to the interdependence of people and nature, and more specifically people and migratory birds.

As birdlife and people share the same planet and the same limited resources, it is important for development to be sustainable - to allow for the habitat needs of our fellow creatures.

To mark the Day, SERAG mounted a display at The Grove Library. It included photographic and other material relating to migratory shorebirds that frequent the Swan River Estuary - birds such as the Red-necked Stint, Great Knot, Grey Plover and Greenshank.

In about September each year, migratory shorebirds begin to arrive and inhabit wetlands of Western Australia's north- and south-west, feeding mostly on the invertebrates that live in shallow water in drying wetlands, tidal flats and salt marshes.

For millennia these incredible birds have made round trip migrations of up to 26,000 kilometres each year between their summer breeding grounds in the northern hemisphere and their feeding areas in the south. They travel over several weeks, with brief stops at staging sites along the way to rest and refuel.

Tragically, the numbers of migratory birds are plummeting due to loss of habitat - both along the way and here.



To draw attention to their plight, local resident Amellia (Milly) Formby aims to replicate the journey of the Red-necked Stint in an epic flight to the Tundra. Milly's crowd-funding campaign concluded with over \$18,000 raised. Well done!

## ACKNOWLEDGING OUR VOLUNTEERS

With the help of a small grant from Volunteering WA we celebrated Volunteer Week on May 13 by holding a simple and enjoyable 'thank you' morning tea event at Pelican Point.



During the seven years we have been coordinating volunteer efforts at Pelican Point more than 5,000 hands-on volunteer hours have been contributed by SERAG members, university students, teams from Conservation Volunteers Australia and corporations and individuals from the wider community. Together with supportive funding from various sources, this generous bushcare endeavour has been and remains vital to the site's on-going well-being.

Around forty people attended the celebration. Noongar Elder Reverend Sealin Garlett welcomed us, and the event was officially marked by the planting of a beautiful native banksia seedling and a mature grass tree - the latter rescued by a Fremantle enviro-business from a site where bushland is being cleared for urban development.



People begin to gather for the event



Reverend Sealin Garlett welcomes us



A mature grass tree is planted

Photographs courtesy T Graham Taylor

## POISONING OF FORESHORE VEGETATION CONTINUES

A stand of once beautiful, healthy *Casuarina* obesa in Alfred Cove A-Class Nature Reserve has been targeted by local vandalism.

Three or four mature trees are dying, and with them the various habitat, erosion-mitigation and general river-health benefits they provide will be lost.

These photos show dying trees, suspicious interference at the base of a tree trunk, and kikuyu immediately surrounding the trees that has died too.

Trees that have been lost at this spot - and at other sites that have been similarly targeted - will be replaced, however.







Vandalized trees Photographs courtesy M Matassa

Monitoring will also be increased and people are urged to report any suspicious behavior they observe to the Department of Parks and Wildlife on P: 9303 7784 | M: 0412 893 801.

#### RAINBOWBEE-EATERS AT ALFRED COVE

On an early morning at Troy Park in March, volunteers paused in their weeding to witness dozens of Rainbow Bee-eaters (*Merops ornatus*) flashing their iridescence in the sky as they breakfasted 'on the wing'.

We regretted not having a good camera with us at the time to capture their aerobatics; however, the photograph (right) of some of them briefly resting on a dead shrub indicates the numbers involved!

Listed as a Migratory species and a Marine species under the *Environment Protection and Biodiversity Conservation Act 1999*, the Rainbow Bee-eater is found across much of mainland Australia, and on several near-shore islands. It is not found in Tasmania and is thinly distributed in the most arid regions of central and Western Australia.

BirdLife Australia describes it thus: 'The Rainbow Bee-eater is a spectacular bird. With its green, blue, chestnut and yellow plumage, its slim build, slender curved bill and distinctive streamers that extend from the end of its tail, it is simply beautiful.'

Interestingly, during the breeding season, 'both males and females select a suitable nesting site in a sandy bank and dig a long tunnel (average length: 89.4 cm) leading to a nesting chamber, which is often lined with grasses. Both parents incubate the eggs and both feed the young, sometimes with the assistance of auxiliaries (helpers).'

Rainbow Bee-eaters migrate during the winter into northern Australia, New Guinea and to some southern islands of Indonesia.





Photographs courtesy M Matassa & BirdLife Australia



# FOR YOUR JUNECALENDAR

- TREEmendous Tuesdays: Alfred Cove 7.00am 9.00am
- 03 (Sat) UWA@PP 9.00am 11.00am
- 05 (Mon) *World Environment Day* Curtin Volunteers! Bushcare Alfred Cove 8.30am 11.30am
- 09 (Fri) Corporate Bushcare Day Alfred Cove 9.00am 2.30pm
- 12 Monthly Monday at Milyu 8.00am 10.00am
- 24 Saturday Morning at the Cove 8.00 am 10.00am

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



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