.... about the Estuary

Swan Estuary Reserves Action Group Inc.

VOLUME 9, ISSUE 2

Winter 2018

# CELEBRATING RIVERCARE VOLUNTEERS

A grant from *Volunteering Australia* assisted SERAG organise a simple gathering during Volunteer Week, to thank our volunteers as well as to celebrate community care of the Swan River. *'Give a little. Change a lot.'* was this year's theme.

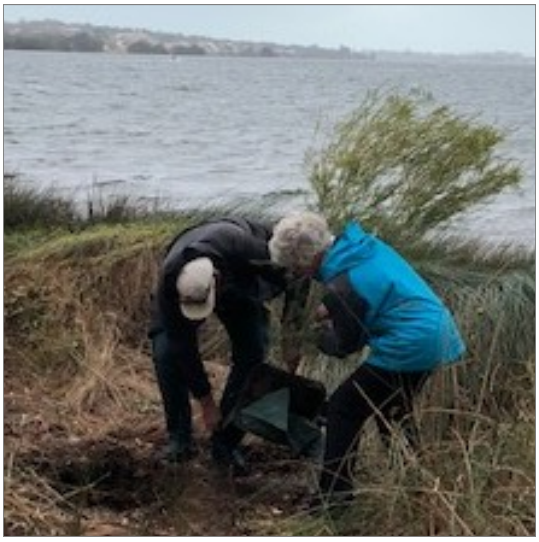
SERAG is one of many community volunteer groups which together engage thousands of volunteers in river protection, conservation and restoration activities throughout the Swan-Canning River Catchment.

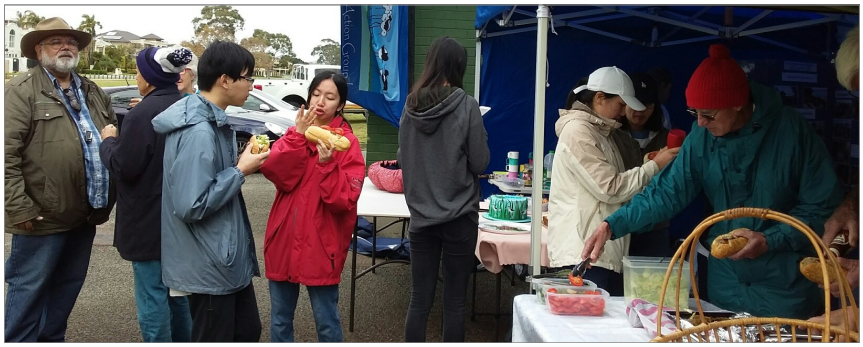
Our event took place on a *very* stormy morning on the banks of the Swan Estuary Marine Park at Lucky Bay, where we are currently undertaking a major restoration project supported by Coastwest funding.

Students from *Curtin Volunteers!* joined our regular *Saturday Morning at the Cove* team, taking advantage of the first rains of the season to plant hundreds of local sedges where weed species have been removed. Towards midday, they were joined by members of our other teams of volunteers and community guests for the main celebration.

Photographs showing past problems and achievements were on display and speakers included Wadjuk Noongar Elder Dr Noel Nannup, Mark Cugley from DBCA, Brian Walker from the City of Melville and our Chairperson Margaret Matassa.

A cake was cut, a *Melaleuca rhapiophylla* planted, and a delicious barbeque lunch shared to mark the occasion.





SERAG's *Volunteer Week* celebration promoting river-care

*Photographs courtesy C O'Neill, N Peters & R Napier*

# SUNSET AT PELICAN POINT

For decades a group of volunteers has been counting birds every Tuesday evening at Pelican Point, monitoring species diversity and use.

The sight of Red-necked Avocets (*Recurvirostra novaehollandiae*) anywhere on the Estuary is becoming rare, so it was extremely thrilling for participants to see these shy wading birds on the Point. Unfortunately they flew away when a careless beach-walker disturbed them.

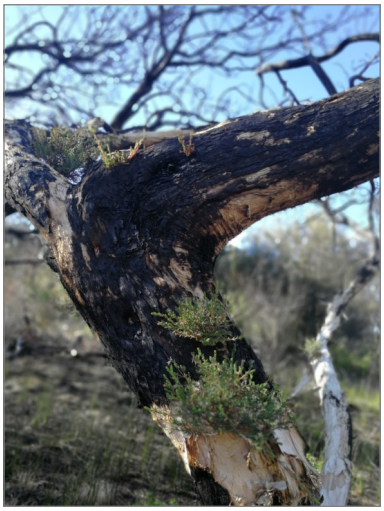
Disturbance is the main reason they are infrequently seen now.

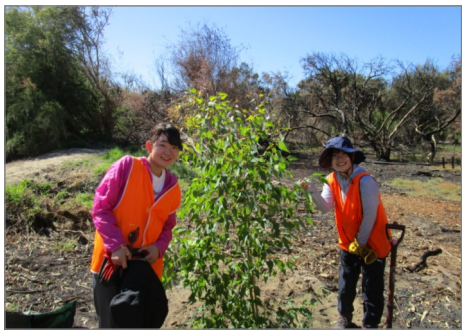
We have again applied for funding to develop a human-movement management plan for the site, so that we do not end up with only seagulls there!

Avocets at sunset *Photograph courtesy T Graham-Taylor*

# FIRE-DAMAGED AREA CLEARED & FIRST TREE PLANTED

In February, SERAG engaged a contractor to help clean up the area of Bush Forever Site 402 damaged by fire. Among the tasks was the removal of an *enormous* fallen pine and some of the many trees and shrubs pushed over by fire-fighters clearing a track for their vehicles and equipment. DBCA was then able to treat an expanse of running grasses stimulated by the fire.





Removing the fallen pine; planting a sapling Tuart, and new shoots emerge *Photographs courtesy R Harvey, C O'Neill & Jiwei Li*

Later in the month, with help from Conservation Volunteers Australia, SERAG spent a day removing woody and other weeds from the wider bushland: Brazilian pepper, tambookie, giant reed, fleabane, palms, and bridal creeper were among those loaded into a large hired green-waste bin and removed from site. Two volunteers from Japan planted a sapling tuart (*Eucalyptus gomphocephala*) to commence restoration of the damaged section.

More recently our *UWA@PP* team has helped prepare the scarred area for further planting during winter, and it has been encouraging to see new shoots emerge on blackened melaleucas and some re-growth of burnt sedges.

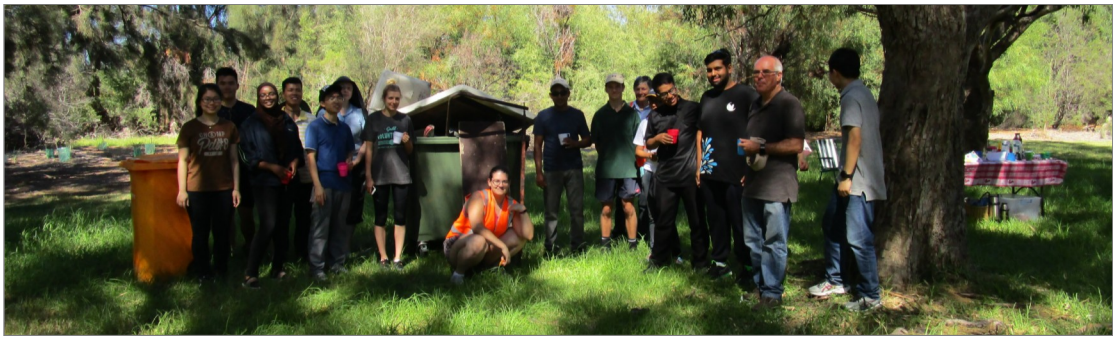
This year SERAG's efforts at Pelican Point are supported by SALP and NRM grants.

# CLEAN UP AUSTRALIA DAY

As always our annual Clean Up Australia Day event in March was well-supported, with twenty-seven people helping to collect over **seventy kilograms** of rubbish from the bushland and foreshores around Pelican Point.

Volunteers included SERAG members, families with children, university students and others from the general public, ranging in age from six to seventy-one years old.

We extend a sincere *thank you* to all who contributed their time and energy to this worthwhile exercise.



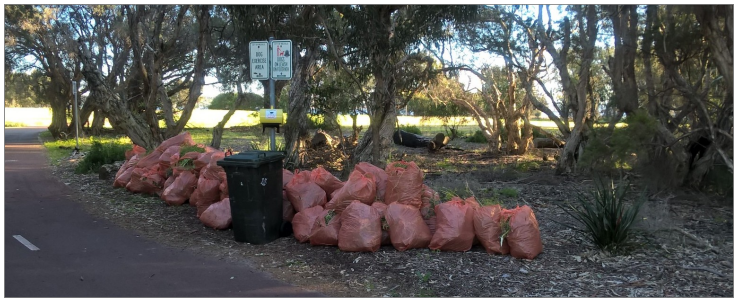
Some of the clean up crowd
*Photograph courtesy C O'Neill*

# AN OVERDUE OPERATIONAL CHANGE

This year will bring an improvement into the way we dispose of weeds at Alfred Cove.

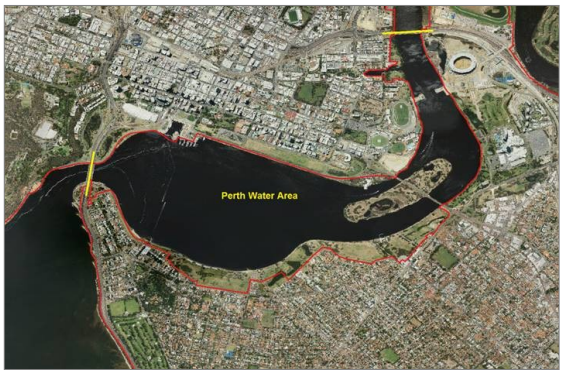
While the bags pictured are an indication of the hard work of our volunteers, they also show how much plastic can be used in hand-weeding efforts during the course of one session - and there are many such sessions over a twelve- month period!

We are now using only strong re-usable bags.



*Photograph courtesy B Walker*

# PERTH WATER PRECINCT PLAN




The Perth Water precinct is the section of the Swan River and foreshore outlined in red between the Narrows and Windan bridges.

Currently a plan is being developed that will set a 'framework determining acceptable developments and uses for the area, based on refining landscape characteristics, community aspirations, and environmental and cultural values. These include recreation, commercial nodes, public access, facilities and services infrastructure, foreshore protection, and environmental enhancement and management'.

Given the ancient cultural significance and ecological needs of the River; that most of its shoreline has already been used for commercial, transport, recreation and housing developments; the health benefits of access to green open spaces to a growing and increasingly compact community, and the profits to be made from a burgeoning eco-tourism industry (especially one catering for short-stay visitors to Perth), SERAG recommended that **the green belt is maintained and enhanced** to celebrate the River's natural, cultural and visual landscape values.

Drawing on the success of the *Thames21 Project* and the popularity of Kings Park, we suggested rebuilding a natural relationship between the community and the River. An emphasis on habitat development for birdlife was recommended, with wetlands, board-walks, pathways and picnic/information nodes providing opportunities for people to appreciate and enjoy some of the rich biodiversity that once thrived on the Estuary.

# WORLD WATER DAY 2018

Celebrated on 22 March each year the theme for this year's World Water Day, was *'Nature for Water - exploring nature-based solutions to the water challenges we face in the 21st century'*.

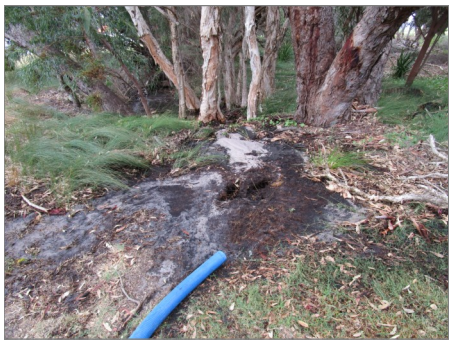
Increasing population, decreasing rainfall and increasing community expectations regarding environmental issues have led to increasing recognition of the values associated with water resources. Water resource values can be ecological (eg supporting flora and fauna) and associated with human use (eg drinking water, recreation, agriculture and industry). In the past, stormwater was perceived as a waste product with a cost, but it is now recognised as a resource with social, environmental and economic opportunities.

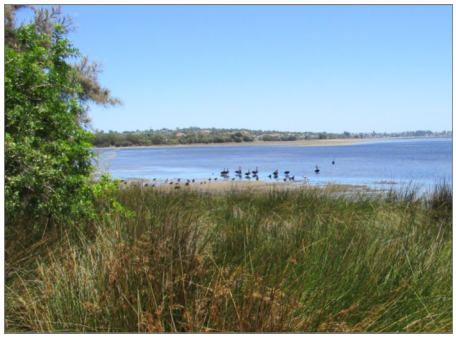
Unfortunately, this year World Water Day corresponded with the chance discovery of inappropriate stormwater management. In this instance, while litter and other solid materials were being filtered from local stormwater pipes and traps, water still contaminated with urban pollutants such as oils, heavy metals and chemicals was pumped onto a beautiful area remnant melaleuca wetland habitat on the Attadale foreshore - part of Bush Forever Site 331.

Along the Attadale/Alfred Cove/Applecross foreshore, twenty outlets pour into the Swan Estuary Marine Park, an extremely sensitive receiving environment. A further complication is that many water birds, including swans, rely on this 'fresh' water for drinking, as Estuary water is too salty and the drains replace natural streams that once serviced the surrounding catchment.

Nature-based solutions have the potential to solve many of our stormwater challenges, and there are a number of successful nature-based initiatives in operation: the City of Belmont's Coolgardie Living Stream and Garvey Park Floodplain project; the Bannister Creek initiative in the City of Canning, and the Brentwood Living Stream project in the City of Melville.

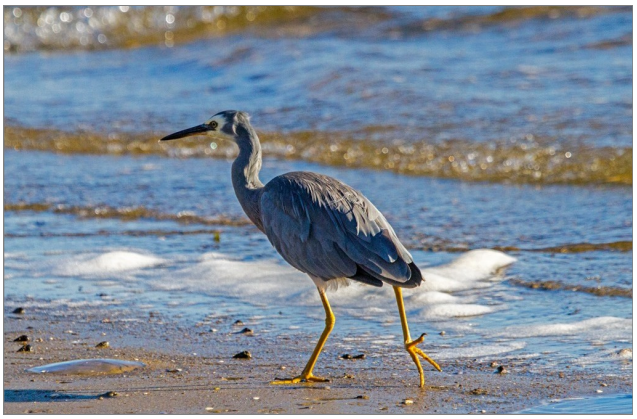
A new management plan for stormwater entering the Swan Estuary Marine Park around Alfred Cove is needed - a nature-based plan that builds on a traditional objective of local flood protection by having multiple outcomes, including improved water quality management, protecting ecosystems, valuing stormwater as a resource, and providing healthy attractive communities.





Opening to a stormwater pipe; water filtered of hard materials only is dumped onto remnant wetland, and water birds gather at a drain outlet *Photographs courtesy C O'Neill*

# ESTUARY *HAUTE COUTURE*



White-faced Heron at Pelican Point
*Photograph courtesy T Graham-Taylor*

Presenting in an elegant assemblage of soft blue-grey feathers, yellow stockings and powdered cheeks the White-faced Heron (*Egretta novaehollandiae*) demonstrates a rather sophisticated appreciation of Estuary *haute couture.*

This medium-sized heron is found in a range of wetland habitats, generally feeding alone on a diet of fish, frogs, small reptiles and insects. It uses various techniques to find its prey, including standing quietly and waiting for movement, walking slowly in shallow water, searching among damp crevices, wing flicking, foot-raking and even chasing prey with open wings.

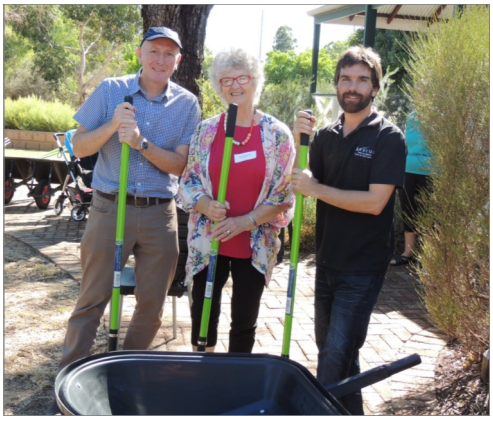
While it may be 'the most commonly seen heron in Australia', nevertheless it is always a pleasure and privilege to encounter the White-faced Heron on the Swan River foreshore.

# SERCUL ACKNOWLEGES SERAG VOLUNTEERS

The South East Regional Centre for Urban Landcare (SERCUL) is an independent Natural Resource Management body in Perth, bringing together the community, business and government on projects that improve the health of our waterways and other ecosystems.

At a breakfast organized by SERCUL in March to celebrate the contribution of volunteers, SERAG was among the community groups to receive acknowledgement by showcasing specific environmental achievements.

Using a timeline of photographs, Chairperson Margaret Matassa recounted the wonderful efforts of our volunteers in restoring areas of riparian vegetation bordering the Marine Park at Alfred Cove, and thereby secured the very useful prize of a wheelbarrow and three long-handled shovels for the group.



Environment Minister Stephen Dawson, Margaret Matassa & Dan Friesen from SERCUL
*Photograph courtesy SERCUL*

# DO NOT DISTURB!

It is estimated that there are around ninety species of bull ants across Australia.

Bull ants (*Myrmecia*), are large and alert insects. They can be found in urban areas, forests and woodland, and heath. They have large eyes and long, slender mandibles (jaws) - and a potent venom-loaded sting. Their nests can extend several metres below the ground and they will attack intruders of any size that come too close. Having excellent vision, they will follow or even chase the trespasser a good distance away from the entry. Bull ants feed on nectar and other plant juices, as well as animal prey, which are carried back to the nest.

The fabulous construction pictured is the work of a colony of 'sergeant' ants at Pelican Point. This ant is about 30mm long, reddish-brown with yellow mandibles and a dark red to black abdomen. (If you look carefully you may see the mandibles of one of the residents emerging from its subterranean dwelling.)

Our volunteers accord the utmost respect to this species!

Eamonn Bermingham once quipped in *CSIROscope*:

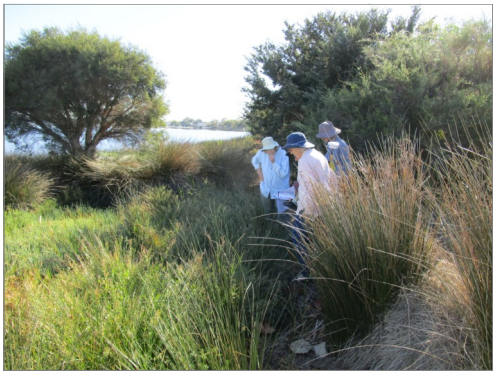
'*Interior designers at heart, bull ants like to decorate their nests with pebbles, twigs and other bits and bobs they can find. Some have even been known to heat their nest up by decorating the place with dry materials that heat quickly, providing their home with solar energy traps.*

*Brainy as they are, however, the Australian bull ant won't be found wanting in the brawn department.*'

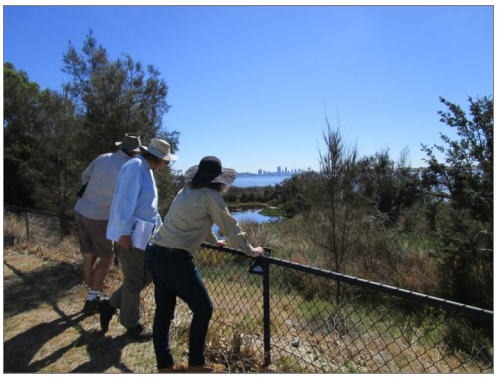
A beautifully built bull ant nest - with the diameter of a large dinner plate and a 7cm high mound
*Photograph courtesy C O'Neill*

# COASTAL SALTMARSH MAPPING AT ALFRED COVE

In all our restoration efforts to date it has been encouraging to see that where we have removed weeds, native vegetation has either emerged from dormant seed-banks or been freed to thrive once again. It has been particularly pleasing to note some improvement in the health of areas of Coastal Saltmarsh, which is federally listed as a Threatened Ecological Community.



An ecological community is an assemblage of species which can include flora, fauna and other living organisms that occur together in a particular area. *Threatened ecological community* (TEC) is a term used for ecosystems that are in danger of being lost due to some threatening process. Federally, threatened ecological communities are identified and protected under the Environment Protection and Biodiversity Conservation Act 1999.



Examining the condition and extent of foreshore vegetation
*Photographs courtesy C O'Neill*

Coastal Saltmarsh is a mostly treeless plant community identifiable as a low mosaic of salt-tolerant vegetation (halophytes) - succulent herbs, shrubs, grasses and sedges - found in the tidal flats of estuaries. Such communities are now recognised nationally and globally as fragile ecosystems of immense ecological value which are increasingly under threat.

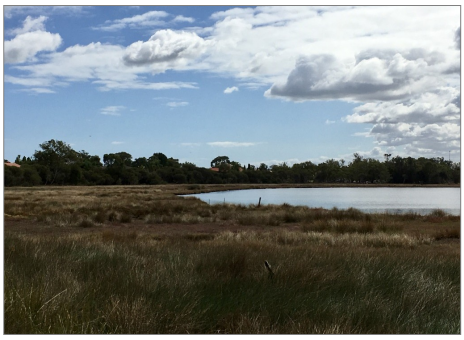
The community provides extensive ecosystem services, including flood control, sediment, nutrient and pollutant filtering, and most importantly the provision of food, shelter and breeding habitats for a wide range of organisms. It is highly adapted to its dynamic environment and contributes greatly to the maintenance of a biologically balanced and healthy waterway.

Unfortunately in the Swan River Estuary there is very little saltmarsh left. A few years ago an area of Pelican Point was added to the listed sites, and currently a revision to the mapping of the saltmarsh community bordering the Marine Park at and around Alfred Cove is being undertaken.

Recently, a group of volunteers joined Julia Cullity from the Department of Biodiversity, Conservation and Attractions to first generally assess the entire length of the Marine Park shoreline then complete more detailed and accurate surveys. Key diagnostic characteristics and condition thresholds are used in identifying an area or patch of the TEC. The presence of weeds is an important factor in the determination.

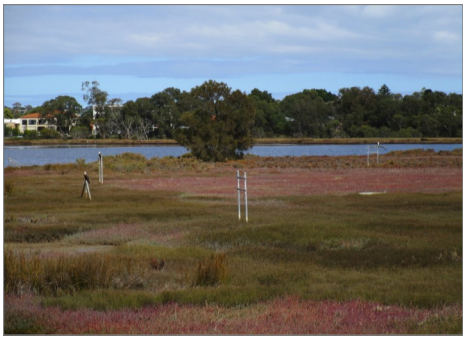
# SWAN RIVER ESTUARY COASTAL SALTMARSH

There is great floristic richness in Western Australian Coastal Saltmarshes.



While there has been an enormous loss of this community from the Swan River Estuary due to development, we are fortunate to still have a few places where rich and diverse groupings of native saltmarsh species can be found, including: *Sarcocornia quiqueflora/ Suaeda australis/ Samolus repens* heath; *Juncus* sedgeland complex; Shrubby Samphires (*Tecticornia*); *Sarcocornia blackiana* complex, and *Bolboschoenus caldwellii* sedgeland.

These areas are inhabited by a wide range of benthic organisms and support numerous resident and visiting crustaceans, insects, fish, birds and mammals.



At Alfred Cove: Sedge and samphire beds; *Sarcocornia* sp in flower; *Suaeda australis* flushing a gorgeous pink among sedges, and three resident osprey on a beautiful expanse of various saltmarsh species *Photographs courtesy M Matassa & C O'Neill*

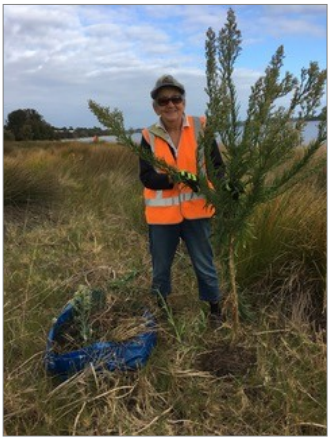
# GIGANTIC PROBLEMS ON ATTADALE FORESHORE

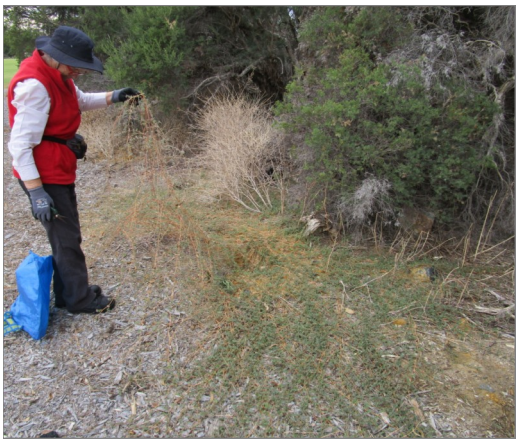
With much of the original wetland foreshore built up with dredging spoil and other landfill material, increasing erosion pressures and a general lack of middle-storey and canopy species to moderate exposure, native vegetation struggles to survive.

Not so with weeds it seems!

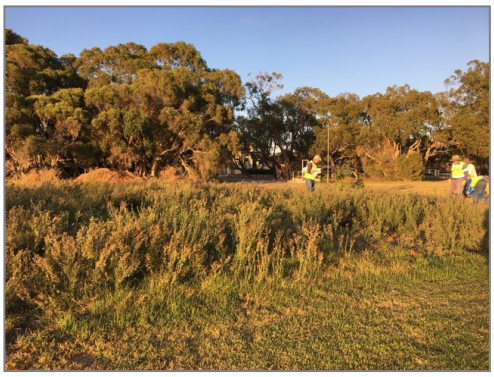
Not only do we often tackle giant outbreaks of wild radish and the like, but individual weeds seem to grow to gigantic proportions.

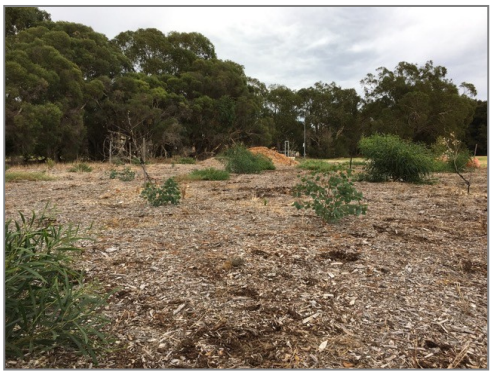
Fortunately, the determination of SERAG's members and friends is similarly robust.





Giant plants of fleabane and caltrop *Photographs courtesy M Matassa & C O'Neill*





*Before* & *After* shots of fleabane removal efforts on the Attadale foreshore
*Photographs courtesy M Matassa*

Through the cumulative efforts of our *TREEmendous Tuesday* and *Saturday Morning at the Cove* teams, and a combined CVA/SERAG team, a large expanse of habitat destroyed by a local vandal, then subsequently thickly invaded by fleabane, was carefully weeded, revealing good news: a few shrubs survived the attack and self-sown eucalypts have sprouted.

SERAG volunteers regularly clear the Attadale foreshore of seasonal weeds, but kikuyu, buffalo and couch grasses, Black Flag and *Carex divisa* are beyond hand-removing capacity. If even small outbreaks are not tackled promptly these weeds rapidly expand their range to pose persistent and increasingly challenging problems to native flora and fauna.

Thanks to Community Rivercare Program funding, SERAG - working in close consultation with DBCA and the City of Melville - will soon embark on a three-year project specifically targeting these weeds. The support will also allow for the replacement of vandalized vegetation and some of the *Casuarina glauca* currently being removed from the foreshore by DBCA, as well as some erosion-mitigation work in particularly susceptible places.

The intention of this project is to strengthen the ecological health and resilience of the foreshore adjacent to the Swan Estuary Marine Park by facilitating the natural growth of sedges, shrubs and trees and where necessary, replacing weeds with appropriate native species.

As is the case for all grants received, funding will be matched with the contribution of community volunteer hours to an equal value. The project will commence in June 2018 and conclude in July 2021.

## FOR YOUR JUNE CALENDAR

- TREEmendous Tuesdays: Alfred Cove 7.00am - 9.00am
- 02 (Sat) *UWA@PP* 8.30am - 10.30am
- 05 *World Environment Day*
- 11 Monthly Monday at Milyu 7.30am - 9.30am
- 23 Saturday Morning at the Cove 8.30am - 10.30am
- 26 (Tues) Bushcare Alfred Cove 8.30am - 2.30pm

**Please contact SERAG to register your interest and for further details.**
**Please check our website for a calendar of events for the year.**

*This year, SERAG will support BirdLife Australia and other groups in the Places You Love Alliance, representing people who love our national parks, wildlife, and precious natural beauty, to campaign for a new generation of environmental laws.*

Swan Estuary Reserves Action Group Inc.

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