



CONSERVATION UPDATE

June 2020 to August 2020

Prepared by Jessica McKelson, Conservation Manager.

HIGHLIGHT – THREATENED SPECIES FLORA

Over the winter months there has been a focus on weed control around the Crimson Berry populations, targeting Gorse at The Gap-YCW site along with Boxthorn and Apple of Sodom out on Cape Woolamai.

In the woodlands, we have been searching for self-seeded Currant Wood, *Monotoca glauca*. Natural recruitment of this species has been absent for many years. It is an aging population with no young plants observed developing to maturity. Closer observation, however, revealed that new seedlings were emerging hidden amongst the dead brush of some old senescent plants. The dead brush protected the seedlings and provided some shelter against browsing by Swamp Wallabies and rabbits. To enable greater development, we installed corflute tree-guards around approximately 120 *Monotoca glauca* seedlings. Locations of the seedlings were mapped on Collector for ArcGIS so that we can continue to nurture and monitor the young plants' progress.

This work was done in line with all public health measures, such as physical distancing, wearing face coverings at all times and hygiene requirements.



Photo: Currant Wood, *Monotoca glauca* being protected

- On 14 July, we had the opportunity to speak at a virtual Trust for Nature All Staff Meeting - allowing us to share our threatened species stories with another like-minded organisation.
- Threatened species, particularly EBBs, were the subject of a Nature Parks "Facebook Live" [video](#) on 16 July. During this live session, audience members could ask questions and we could engage a potentially new audience with our threatened species program. This video has now been viewed over 20,000 times.

Hooded Plovers

This year's Hooded Plover season has just started at the Anchorage Rd site. Often this site produces some of the first nests of the season, and we have happened to find it while OLF (orange leg flag) and its un-banded partner 'EZ' were in the middle of a courtship display! It shouldn't be long before we see some nest scraping and egg laying happening!



Photo: Hooded Plovers

OUR RESERVE DURING DEPLOYMENT

The last three months has been challenging for everyone in Victoria. We have been fortunate to deploy our staff at the Nature Parks into meaningful work with the Conservation Department. Over the past three months we have been able to achieve a lot of amazing work throughout our Reserves.

- **AREA PROTECTION ZONES (APZ) – FIRE PREP:**

An APZ is a type of zone to around 20 meters from a property boundary. The goal of fuel treatment is to reduce fire intensity, flame height, radiant heat, and ember attack on people and their assets in the event of a bushfire. This work is part of our annual Fire Management Plan.

- A number of days were spent thinning fire vegetation in the Cape Woolamai Reserve APZ. Work included Conservation staff chain sawing dead or low dropped vegetation with the deployed staff assisting by dragging the vegetation to a controlled burn pile where a General fire fighter fed and maintained the burn pile and extinguished it at the end of the shift.
- The deployment team removed vegetation growing over and around the Nobbies boardwalks and supported the Ground Services team in general maintenance within the area.
- Senior Ranger, Mark Merryfull, led a team building rabbit/wallaby proof cages for protecting Trigger Plants at Sunderland Bay. The idea is to showcase native vegetation by planting small colonies inside protective cages. The day started building rabbit proof cages from recycled materials at Summerland Farm which were then transported to the Sunderland Bay Boardwalk and strategically positioned.
- Deployed staff have been putting in huge hours tackling woody weeds across our sensitive Coastal Reserves. Work was also undertaken through Swan Lake/Green Lake and Summerland Peninsula along with three days of the tackling invasive weeds Apple of Sodom, Boxthorn and Inkweed. See below the maps for our total weed work across the Island!





Photo: Andrew and Bryan removing Boxthorn

- Deployed staff and Environment rangers spent several weeks working on Summerland Peninsula fire suppression preparations including removal and thinning of vegetation on St Helens Rd at the Summerland Peninsula to strengthen strategic fire breaks throughout the Reserve.



Photo: Deployed staff supporting strategic fire break work in Summerland Peninsula

- Team members planted out old management roads in the Summerland Estate to create wildlife habitat and also planted groundcovers around new bollards at Shelley Beach. A total of 58 trees were put in the ground and guarded along with 80 ground covers. There was a silver lining when the sun came out after the team was rained on!



Photo: Jon and deployed staff helping with Asset Protection Zone fuel load clean up.

REVEGETATION AND WEED REMOVAL – REDEPLOYMENT

- Revegetation: Total plants installed is 11,240 and total revegetation area is 7.4 hectares. Average planting density of 1,500 plants per hectare
- Weed control totals for the period are:
 - Apple of Sodom – 51.1 ha
 - Arum-lily – 1.4 ha
 - Blue Periwinkle – 0.05 ha
 - Boxthorn – 15.6 ha
 - Bridal Creeper – 9.5 ha
 - Cape Ivy – 0.3 ha
 - Capeweed – 1.0 ha
 - Couch – 0.2 ha
 - Dolichos Pea – 1.1 ha
 - Gorse – 6.1 ha
 - Horehound – 4.2 ha
 - Inkweed – 5.0 ha
 - Kikuyu – 2.6 ha
 - Phalaris – 0.5 ha
 - Polygala – 21.2 ha
 - Red-hot Poker – 0.2 ha
 - Spear Thistle – 32.2
 - Tall Wheat-grass – 0.3 ha
 - Variegated Thistle – 6.3 ha
 - Other – 4.8 ha

Basemap

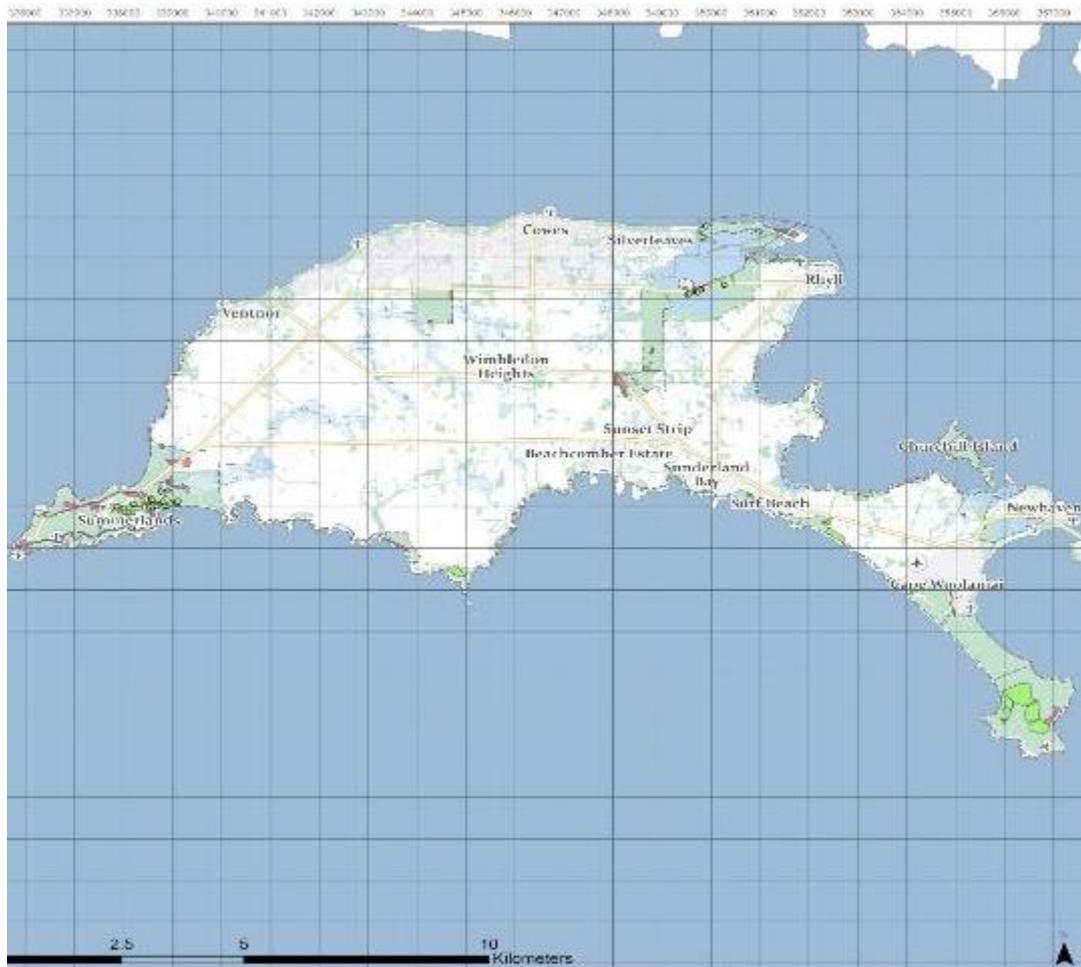
Land/ocean

- Ocean
- Land
- Revegetation

Weed control

- Woody Weed
- Vine/Creeper
- Herb/Succulent
- Grass/Sedge
- Bulb
- Aquatic/Semi-aquatic
- <all other values>

Total weed control for the period: 163.8 ha



AUSTRALIAN FUR SEALS

We had a successful trip out to Seal Rocks in July, disentangling four out of five Australian Fur Seals entangled in fishing line, nylon baling string and trawl net. Two of the seals were pups, two juveniles and one was an adult female.

Seal scats were collected for the diet study (started in 1997), one of the longest running research programs on fur seal diet in the world, identifying changes in prey availability in the ecosystem. We managed to pick a small window in the windy August weather and Fisheries took us out to Seal Rocks where we released another two out of five entangled fur seals: one female pup with a bag handle around its neck and one female juvenile with recreational fishing line deeply embedded around her neck.



- A Long-nosed Fur Seal juvenile (or New Zealand Fur Seal) was observed on Seal Rocks during the July trip. It is not unusual to have these seals use Seal Rocks from time to time, and it is expected it is most likely visiting from breeding colonies close to Wilsons Promontory.
- The Nature Parks received five hydrophones (underwater sound recorders), funded by the Penguin Foundation, which have arrived safely from France. The aim is to have them in the water this summer for the PhD examining visitation, disturbance and health at Seal Rocks.
- 'SealSpotter – Return to the Rocks' has been enjoyed throughout Victoria during August, aligned with National Science Week. New drone surveys were provided for counting over a second two-week challenge for 2020. There were 158 participants including Wonthaggi High School and Nagle College Bairnsdale, both of which have incorporated SealSpotter into their science programs.

PEST CONTROL

Feral Cat Research

The second round of feral cat tracking at Cape Woolamai commenced in May with a total of nine feral cats trapped, fitted with GPS collars and released. The aim is to learn more about how feral cats use the landscape, interact with each other and to evaluate our current monitoring techniques such as camera trapping and spotlighting.

GPS data from collared cats has been collected over the past three months before trapping recommences to recover collared cats before the Short-tailed Shearwaters return in late September.

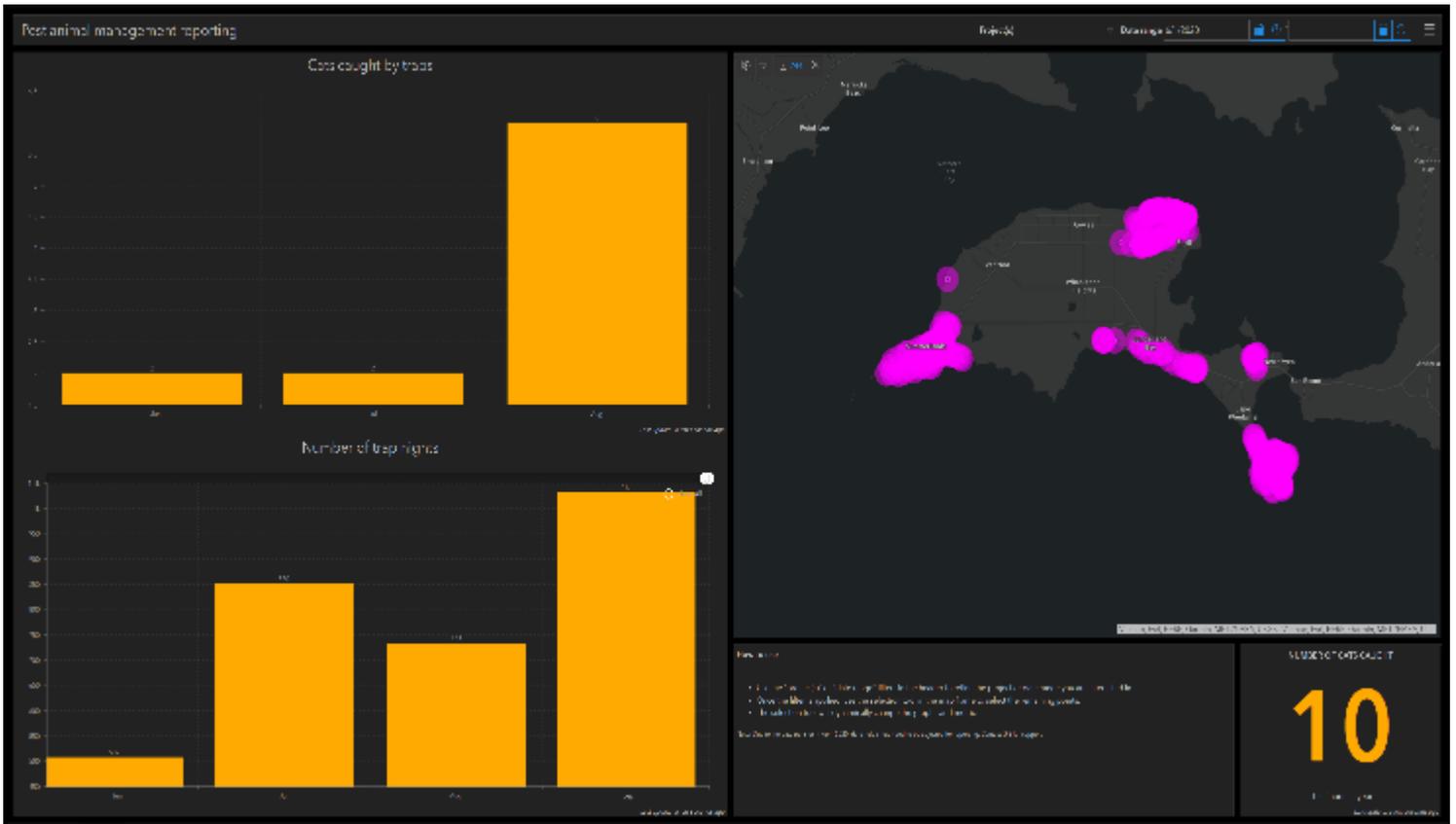


Photo: Collared feral cat on monitoring camera



Photo: Track of feral cat #5 at Cape Woolamai between June and August 2020

- A total of 31 feral cats were trapped between June and August in areas including Cape Woolamai, Summerland Peninsula and the Ramsar coastline near Rhyll Inlet at Observation Point.



Feral cat detection dogs

- Training of our Feral Cat Detection Dogs Marbee and Milly is progressing well with Marbee indicating on feral cat scats consistently. Training has commenced on feral cat scent trails with both detection dogs.



Photo: Marbee and Milly undergoing training for Feral Cat Detection

Foxes

- Three reports of fox sightings at Sunderland Bay, Forrest Caves and Newhaven were investigated with detection dogs and night-time surveys. No physical evidence has been revealed to date.
- As part of the *Grampians Ark Project*, Craig Bester and the fox detection dogs assisted Parks Victoria to undertake surveys at high priority sites to evaluate the effects of longterm fox control on fox occupancy and diet. During the week-long visit, Craig and the dogs covered 64.3 km of transects and located, mapped and collected over 200 fox scats for analysis. Results will help program staff refine control programs and assess impacts of foxes on threatened species in the area.



Photo: Jazz indicating on a fox scat in the Grampians National Park

Rabbits

In collaboration with Bass Coast Landcare Network, we undertook rabbit monitoring and control (baiting, warren destruction and follow-up shooting) at sites at the eastern end of Phillip Island resulting in a 72.2 % reduction in rabbit density.

Future work will extend westward to reduce the impacts of rabbits in private land areas. We are pleased to continue this partnership with the team at Bass Coast Landcare, so they can maintain the work in reducing rabbits across some of the natural reserves and landscapes.

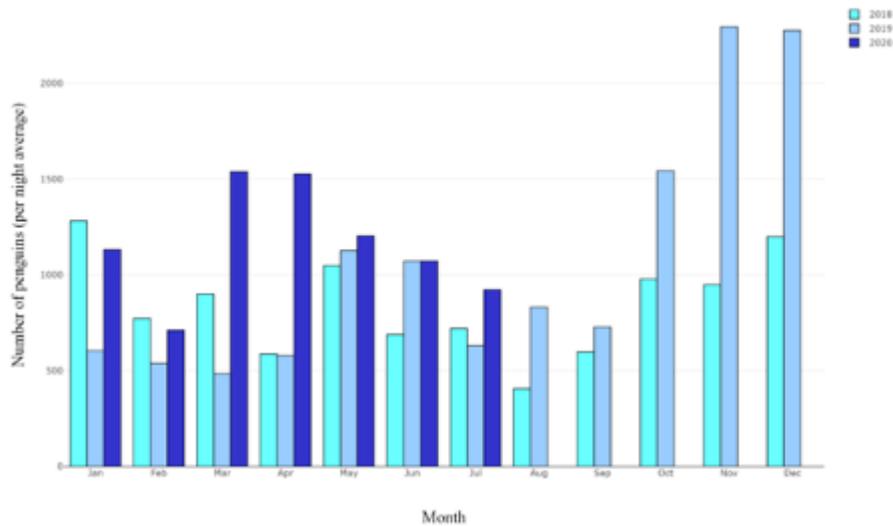


Photos: Nature Parks and Bass Coast Landcare Network staff undertaking rabbit warren fumigation at Scenic Estate

PENGUINS

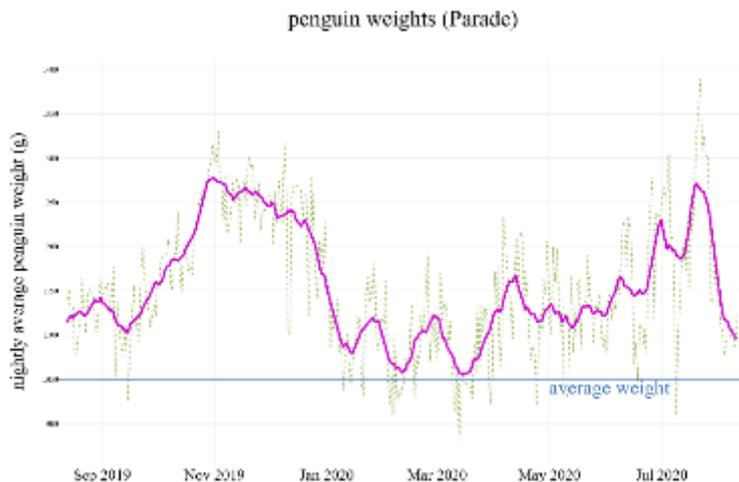
The average number of penguins crossing the beach at the Penguin Parade in July 2020 was 923 penguins each night, 32% higher than July 2019 (630 penguins/night) and 22% higher than July 2018.

July 2020 graph:



The Bureau of Meteorology tells us ocean waters are likely to be warmer than average in late June and July. Last year, penguins started breeding in late July.

Penguins have already started breeding at the Parade, earlier than in other sites. About 80% of nests have eggs at the Parade. This breeding onset is one of the earliest breeding starts in the record at the Penguin Parade. It is still too early to give an island-wide average breeding start date and compare with previous years given that breeding is yet to happen in other sites. Penguin weights are down from last month but remain above the long-average. It is probably due to *La Nina* conditions developing this year, which usually bring above-average rains on land and warmer conditions that favour penguin foraging success. An early breeding start triggers an increase in fieldwork. We are fortunate for having the extra help in the field from the Nature Parks' deployment team.



Adults penguin weights have dropped in July but they are still above the average weight (solid blue line).

KOALAS – BUSHFIRE RESPONSE



Photo: Vicky

- Conservation Manager Jessica McKelson is working with Zoos Vic and DELWP on the upcoming release strategy for the bushfire koalas currently in our care. Jessica also holds a position on the Victorian Koala Management Strategy Working Group which aims to implement new strategies for koala management in Victoria.
- The Koala Conservation Reserve tree safety audit was completed along with works on high-risk category trees. Yearly audits will follow to maintain the safety of some of the aging Eucalypts. With the help of deployed staff, the last of the Eucalypts to be planted in the Koala Plantations was completed. Approximately 1,500 trees with guards were planted for this season. Their purpose is to provide supplementary feed for the KCR koalas.
- The new semi-wild koala enclosure, that was funded by WWF Australia, is now complete. It will house up to six bushfire koalas as they transition from the Nature Parks back to the wild. Three bushfire koalas were moved from the pens into the new facility after they were given a health check by Healesville Sanctuary vets. To date, these koalas have settled in well and this is the last stop before they are released back in to the wild. Work has now also begun on the second semi wild facility, which may be needed in the future for catastrophic events.



Photo: New semi wild facility funded by WWF Australia

- Deployed staff have been appointed to undertake a behavioural observational study on the bushfire koalas prior to their release back to the wild. This will provide baseline data for a post-release study to monitor the health and rehabilitation efforts that have been invested in the bushfire koala rehabilitation efforts to date.

- Our second oldest koala, Callisto, passed away. She was born in 2001 and had lived a long life in the Koala Conservation Reserve.



Photo: Callisto

WILDLIFE REHABILITATION & MANAGEMENT

- June – August was much quieter than usual this year with a total of 182 calls responded to by Wildlife Clinic Rangers. It is noticeable with reduced traffic on the Island, that the number of wildlife entering the Clinic is also reduced. A wide variety of species (34) have been attended to during this time, including an Eastern Barred Bandicoot, a Scaly-breasted Lorikeet, Brown Goshawks, Echidnas, a Yellow-tailed Black Cockatoo and an Australasian Gannet.



Photo: Scaly-breasted Lorikeet

- Rangers were kept busy during June/July with several calls regarding a dolphin hanging around buoys. The dolphin was observed uninjured and moving freely and all reports were passed on to Marine Response Unit (MRU) and the Whale and Dolphin Hotline. No intervention was required.
- The Australasian Gannet found entangled in fishing line, was transferred to Melbourne Zoo to regain strength and enable exercise of its wings before being released a week later.
- In July, a Silver Gull was admitted due to being entangled in two fishing hooks and fishing line. After removing the entanglements, the bird spent a short time at the Clinic and was able to regain strength and condition before being released.

RESEARCH PUBLICATIONS

Fresh sources of DDT in Short-Tailed Shearwaters and Little Penguins - establishing baselines for pollution

Study establishing baselines for contamination in seabird species were published in the Marine Pollution Bulletin.

- There is little baseline information on persistent organic pollutants (POPs) in marine environments in Australia.
- This is relevant when vulnerable populations, such as penguins, are facing multiple stressors while highly constrained within their geographical range.
- It investigated the presence and concentration of 45 POPs types in migratory Short-Tailed Shearwaters (25 POPs types recorded) from Fisher Island, Tasmania and resident Little Penguins (18 POPs recorded) from Phillip Island, Victoria.
- Organic contaminants were detected in 13 out of 15 Little Penguin blood samples, with a higher concentration than other penguin species, likely to be due to the proximity of the Phillip Island colony to Port Phillip Bay and the urbanised and industrial centres of Melbourne.
- The presence of novel flame retardant (HBB) is indicative of changing global regulations as the legacy flame retardant (PBDE) is phased out.
- Baseline information enables understanding and assessing cumulative impacts within marine ecosystems.



Lewis, P. J., T. J. McGrath, A. Chiaradia, C. R. McMahon, L. Emmerson, G. Allinson and J. Shimeta (2020). "A baseline for POPs contamination in Australian seabirds: little penguins vs. short-tailed shearwaters." *Marine Pollution Bulletin* 159: 111488.

Follow the story: www.penguins.org.au/conservation