TASMANIAN
LAND
CONSERVANCY

Annual Report

Egg Islands Reserve 2017-18

www.tasland.org.au

Introduction

Egg Islands Reserve was acquired by the Tasmanian Land Conservancy (TLC) in 2007 to protect 136 hectares of black gum swamp forest, wetlands and saltmarsh in the Huon Estuary in southern Tasmania. The Reserve adjoins public land managed by the Parks and Wildlife Service. The management of the Reserve is guided by the *Joint Management Plan for the Egg Islands Reserve and Egg Islands Conservation Area 2009*. The plan is implemented by TLC staff through an Annual Work Plan and Monitoring Plan. Details of ecological monitoring methods can be found in TLC's Ecological Monitoring Procedures Manual on www.tasland.org.au.

The Tasmanian Land Conservancy (TLC) aims to demonstrate excellence in reserve management for biodiversity conservation and has adopted the Open Standards for the Practice of Conservation - which is an adaptive management framework comprising 5 key steps – planning, implementing, monitoring, reporting, review/adaptation and communication.

This report describes progress made towards delivery of the management plan in 2017-18, and comprises:

1. Reserve Scorecard – a table summarising the results of management effectiveness and ecological monitoring to date;
2. Management Effectiveness Summary – providing details of the implementation of key management strategies and making recommendations for plan improvement;
3. Ecological Monitoring Summary – providing details of the status of conservation targets and trends of key ecological indicators

The recommendations made in this report are used to improve management of the Reserve, update the management plan, and revise work and monitoring plans for the coming year. This report is available on www.tasland.org.au and its findings are communicated to TLC Board, supporters and other stakeholders.

Egg Islands Reserve Scorecard 2017-18

Ecological Monitoring				
Target	***Indicator***	***Status 2015-16***	***Status 2017-18***	***Trend***
Black gum swamp forest	Floristic diversity	8.5 species / site	8.5 species / site	Baseline data collected in 2015/6 and repeated in 2017-18. Next monitoring scheduled for 2020
	Structural complexity	6.8 strata / site	6.8 strata / site	
	Canopy recruitment	1.2 cohorts / site	1.2 cohorts / site	
Terrestrial Mammals	Species richness	5 species, all native	9 species, 8 native and 1 introduced	
	Species diversity	Simpson's diversity index 0.34 Shannon-Wiener diversity index 0.64	Simpson's diversity index 0.63 Shannon-Wiener diversity index 1.23	
Wetlands and saltmarsh	Floristic diversity	6 species / site	6.8 species / site	
	Structural complexity	3 strata / site	3 strata / site	
Management Effectiveness				
Strategy	***Indicator***	***Status 2016-17***	***Status 2017-18***	***Trend***
Community engagement	# events	0 events	5 events	Increase
	# of volunteer activities	2 activities /44 vol days	3 reserve activities / 21 vol days	Increase
	# of projects	3: 2 mgt, 1 education	3: 2 mg't, 1 education	Stable
Weed management	Area of weeds	3 ha	< 3h	Improving
	Density of weeds	<1%	<1%	Improving

Cover image: Egg Islands Bequest Trip aboard the Yukon 11 November 2017. Credit: James Hattam

Monitoring Summary

Black gum swamp forest	**Status: Very Good**
Goals: Maintain the condition of Black Gum Swamp Forest	**Outcome: On Track**

Target description:
Black gum swamp forest is a threatened community that has been extensively cleared since white settlement. The Egg Island stands are the largest remaining remnants in south-east Tasmania. The stands are important as foraging and potentially nesting habitat for the endangered swift parrot. Some areas of the property were cleared historically for agriculture. These areas are regenerating and are mostly dominated by native species, although Spanish heath is present in some areas.

Black gum swamp forest along the canal. Photo: A. Townsend

Ecological indicator	**Status 2015-16**	**Status 2017-18**	**Trend**
Floristic diversity	8.5 species / site	8.5 species / site	No Change
Structural complexity	6.8 strata / site	6.8 strata / site	No Change
Vegetation extent	56 hectares	Not re-measured	Due in 2025
Canopy recruitment	1.2 cohorts / site	1.2 cohorts / site	No Change
Terrestrial mammals			
Species richness	5 species, all native	11 species, including 10 native and 1 introduced	2017-18 now baseline data
Species diversity	Simpson's diversity index 0.34 Shannon-Wiener diversity index 0.65	Simpson's diversity index 0.64 Shannon-Wiener diversity index 1.31	2017-18 now baseline data

Findings 2017-18

- No change in vegetation condition reassessed in 2017 at the ten veg monitoring sites (as expected) and the black gum forests remain in excellent condition.
- Due to poor camera success in 2015 terrestrial mammals were re-surveyed. The 2017-18 data was much improved and will now be used as the baseline to assess future mammal trends.
- Two Song Meters were installed at existing fauna sites (SM7 @ EGIS 001, SM8 EGIS 006) and the data has been stored until analysis is possible.
- There is a diverse fauna assemblage on Egg Islands' particularly small mammals. Monitoring identified 11 species in total including long-nosed potoroo, eastern quoll, pygmy possum, swamp rat and antechinus. The 2015 survey also detecting brown bandicoot and eastern-barred bandicoot. No cats were detected during either survey period. These findings indicate the conservation significance for fauna on Egg Islands in the absence of or low no of cats.

Recommendations

- Undertake fauna monitoring on a more regular basis to track small mammal status and verify cat-free status in case of very low detection rates.
- Resurvey fauna in 2020.
- Continue collaborating with UTAS and FT on automated software capable of developing recognisers for bittern and other bird species

Wetlands and saltmarsh	**Status: Good**
Goals: Maintain the condition of Wetlands and Saltmarsh	**Outcome: On Track**
Target description: Wetlands and saltmarsh are highly productive environments that support a diverse range of fauna and provide habitat for large numbers of water birds. Wetlands also perform the key ecological function of maintaining good water quality in the Huon River by acting as a sink for nutrients and sediments Sea-level rise associated with climate change poses a significant threat to these low-lying wetlands.	 Wetland dominated by *Juncus* sp. Photo: A Townsend

Ecological indicator	**Status 2015-16**	**Status 2017-18**	**Trend**
Floristic diversity	6 species / site	6.8 species / site	No change - natural variability
Structural complexity	3 strata / site	3 strata / site	No change
Extent	74 hectares	Not re-measured	Unknown

Progress in 2017-18

- No change in vegetation condition reassessed in 2017 at the ten veg monitoring sites (as expected) and the wetlands remain in excellent condition.
- Neighbouring landholders were contacted in 2017 for bittern records with one neighbour reporting regular booming but no location or dates were provided.
- Progressing acoustic monitoring project with NRM South and UTAS

Recommendations

- Repeat monitoring survey in 2020
- Install fauna cameras in two of the internal wetlands where vegetation is clearer
- Undertake detailed mapping of wetland extent using remote sensing (possibly LIDAR)
- Continue collaborate with NRM, UTAS and FT on automatic acoustic detection capability for bittern and other conservation significant bird species

Management Effectiveness Summary

Weed management

Key objective(s)	**Status 2017-18**
Spanish heath, gorse and blackberry are functionally eradicated from the Reserve by 2017 A plan for controlling New Zealand flax will be implemented by 2018	**On-track**

Strategy description

The aim of this strategy is to eradicate existing infestations of weeds on the Reserve. Spanish heath occurs in areas that were previously cleared for agiculture, and New Zealand flax occurs along the banks of the Huon River. Weed mapping and control is continuing. Although weeds are not extensive or widespread, their eradication should be undertaken in a timely and effective manner to limit their spread.

Amazing volunteer Viv removing Spanish heath. Pic: R Blakers

Indicator	**Status 2017-18**	**Trend**
Area of weeds	< 3 ha	Improving
Density of weeds	<1%	Improving

Progress in 2017-18

- Congratulations to Denna Kingdom on her 8th consecutive year of weed work on Egg Islands.
- Volunteers spent two days in July and August weeding at the Reserve, including following up on trial methods for cut-and-paint of New Zealand flax. The entire Spanish heath infestation was searched and controlled twice, with the majority of plants found being immature.
- Weed control is progressing as planned and will likely be ongoing for at least five more years to completely eradicate Spanish heath. Ongoing monitoring and control of gorse and blackberries will be necessary longterm.
- Weed area remains approximately 3 ha but weed density has been reduced by 99% since 2007.
- New Zealand Flax is now a target species

Recommendations

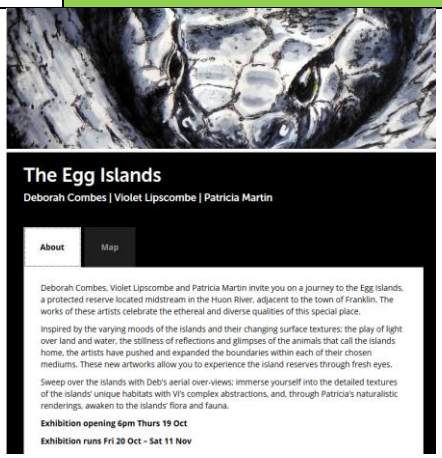
- Review the weed management strategy.
- Continue the successful weed control program until the seed bank is exhausted.
- Continue the control plan for New Zealand flax, with particular focus on treating plants growing on the river bank.

Community engagement

Key objective(s)	**Status 2017-18**
TLC provides opportunities for the community to benefit from the Reserve visit for recreation, education or volunteering	**On-track**

Strategy description

The TLC provides opportunities for the community and individuals to achieve conservation. The local community, volunteers, the indigenous community and other stakeholders are encouraged to participate in planning and land management activities. TLC Reserves provide excellent opportunities for education and scientific research. Sustainable economic development may be supported at some reserves where appropriate.



The Egg Islands Exhibition at the Moonah Arts Centre opened Oct 2017

Indicator	**Status 2017-18**	**Trend**
# events at the Reserve	5 events	Increase
# of volunteer activities	3 reserve activities / 21 vol days	Increase
# of projects	3: 2 mg't, 1 education	Stable

Progress in 2017-18

- TLC hosted 2 Bequester trips on 11 Nov &, 9 Dec 2017 sailing around the island aboard the 'Yukon'. These events were successfully attended by a total of 30 supporters.
- Two – one day volunteer trips to the Islands to control weeds – 19 volunteers in total
- TLC maintained its good relationship with the Living Boat Trust.
- The exhibition inspired by Egg Islands by artists Deborah Combes, Violet Lipscombe and Patricia Martin opened at the Moonah Arts Centre 19 October 2017 for 3 weeks.
- Ecological monitoring was supported by one international volunteer (Rikke) and Peter Venning.
- Huon Valley News Article March 2018 on the fauna monitoring trip
- TLC Newsletter article Summer 2017 NL 52

Recommendations

- Continue to provide opportunities for people to connect with Egg Islands.
- Continue to maintain relationships with neighbours including PWS and the Living Boat Trust.