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Slopen Island Weed Management Project – 2020

Prepared by Eco Works for the Southern Beaches Landcare/Coastcare Inc.

Approaching northern end of the island by boat.

Background

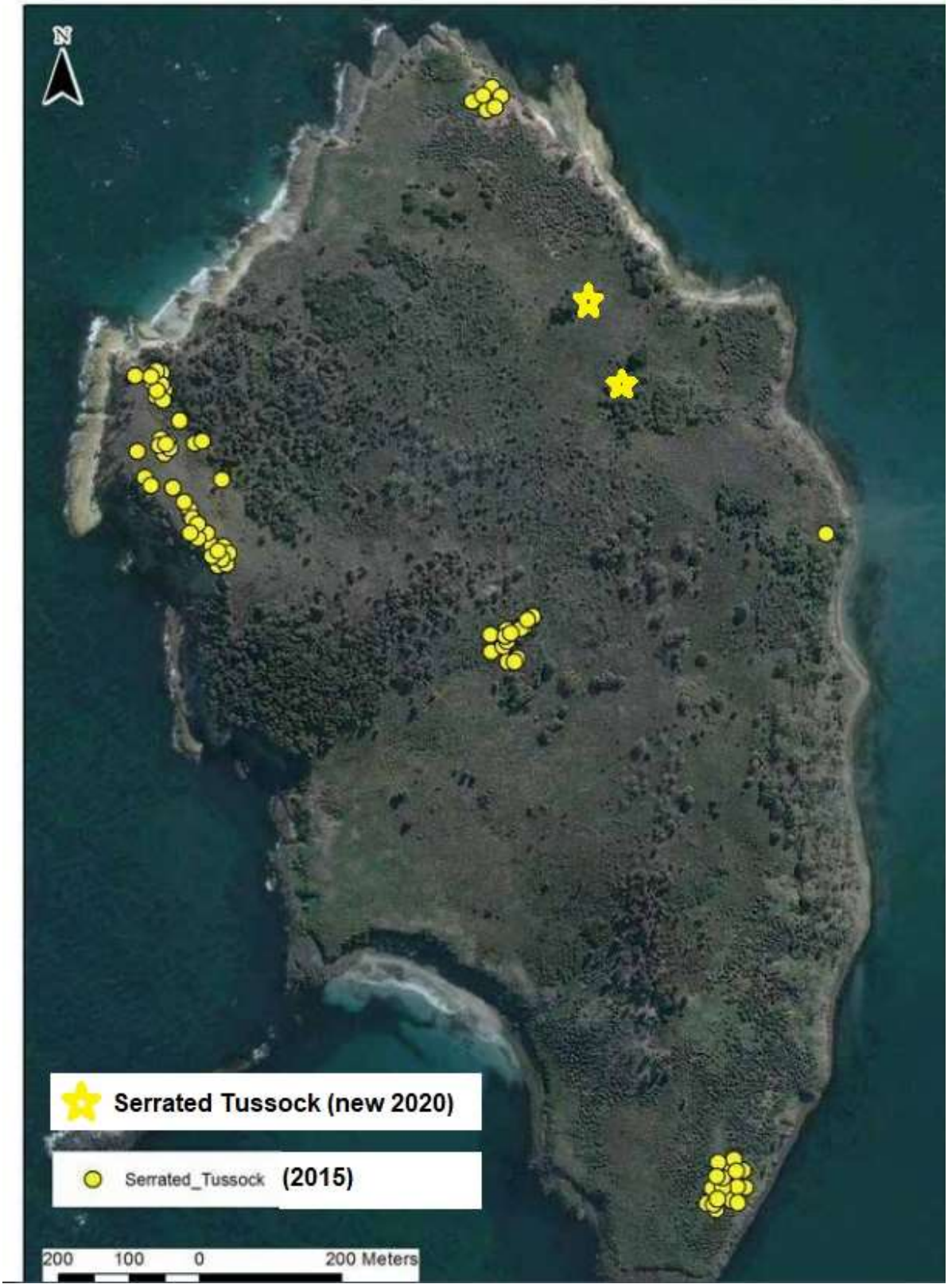
The Southern Beaches Landcare/Coastcare group received a grant under the 2019 Tasmanian Weed Action Fund to undertake weed management on Slopen Island. The project involved undertaking follow-up treatment of weeds that have had numerous (although at times sporadic) previous control efforts. The group as well as a number of other organisations have had previous trips to the island over the past 15 years to manage weeds as part of various other projects.

The most recent previous trip to the island to survey weeds was part of the Hamish Saunders Memorial Trust expedition in 2015. This survey indicated that the issue of weed management on Sloping Island was at a critical juncture. High levels of recruitment in all three key species, particularly for serrated tussock, were of immediate concern. It was concluded that if the new cohort of plants was allowed to reach maturity and set seed then future control is likely to be extremely difficult. Moreover, uncontrolled population expansion would represent a waste of the time, resources and funding expended on previous management efforts, as well as having a negative impact on the significant environmental and cultural values of the island.

Weed Control Actions

Through this project, Eco Works Pty Ltd undertook two trips to the island in May 2020 to undertake control works. The project was supported by the Parks and Wildlife Service, who originally were going to provide transport to the island, however due to COVID19 restrictions this was not possible. Parks did cover the cost of the herbicide used to treat the serrated tussock. The Eco Works team members had a long association with the island, having been involved in the majority of previous efforts to control weeds on the island.

Figure 1. Serrated tussock populations observed on Sloping Island - December 2015.



Serrated Tussock

All previously mapped infestations of serrated tussock were revisited and found still to be present (see map). In addition there were two additional infestations not mapped in 2015, one in the vicinity of the old shed and large pines, and another in the vicinity of the convict ruins.

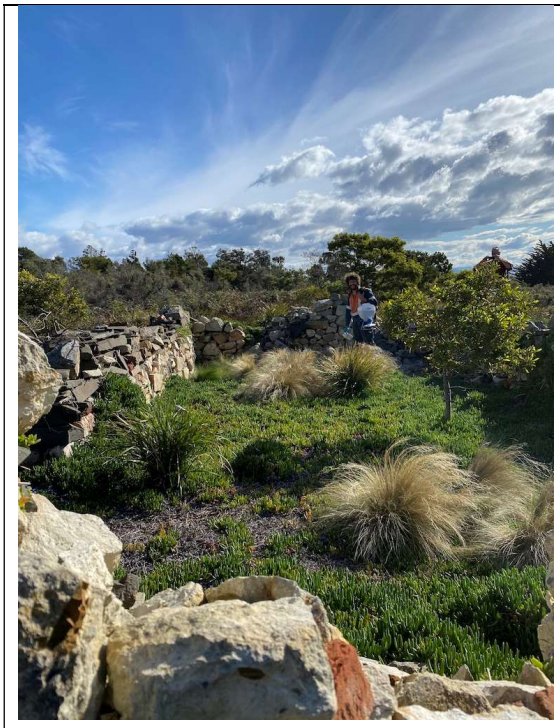
Serrated tussock infestation North West

Serrated tussock infestation South End

Serrated tussock infestation North East

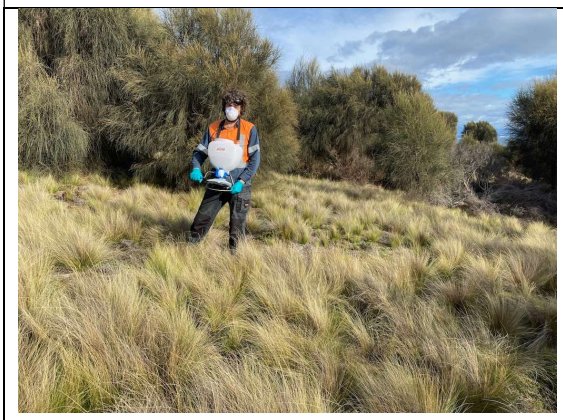
Serrated tussock infestation North West

All infestations of serrated tussock on the island were treated as part of this project. Treatment was entirely using the herbicide GP Flupropanate, which is in a granular form. Broadscale or continuous infestations were treated using a hand-held granular spreader, calibrated to deliver the correct rate per hectare. Individual or scattered plants were treated using hand-held granule applicators designed for the purpose.



Serrated tussock in convict ruins

Hand-held flupropanate applicator



Flupropanate granule spreader

Flupropanate granule spreader

Spanish Heath

The previously mapped Spanish heath infestations were relocated and mostly were found to be in poor condition. Although many plants were still present they appeared to be senescing, or at any rate not growing vigorously or looking like flowering. It was not possible to tell if this was as a result of previous control efforts or another factor. The younger and healthier looking plants were controlled by a combination of cut and painting and hand-pulling.

Hand-pulling Spanish heath.

African boxthorn

Mature African boxthorn plants were found scattered along various parts of the coastline however most of these were in poor condition and senescent. Very few young healthy plants were observed. No control of boxthorn was undertaken.

<u>Recommendations</u>

Within the serrated tussock infestation on the north west corner of the island there were at least 10 large water drums (some plastic and some steel) that had been left on the island in association with a previous weed control trip. Some but not all of these still hold water. Due to the effectiveness and efficiency of granular flupropanate for treating serrated tussock it is unlikely that the water in these drums will be needed for future weed management efforts. That being the case these drums should be removed from the island at the next available opportunity.

Given the long-term persistence of serrated tussock on the island and the obvious well established seed bank, the current control efforts will not have eradicated the infestations. Flupropanate is a selective residual herbicide and when used as a broad acre treatment typically serrated tussock is killed and supressed for approximately 2 years. After that time, if there is vigorous competition in the form of healthy perennial pasture or native vegetation, serrated tussock will not re-establish well and the infestation can be managed with minimal follow-up treatment. If there is still a lot of bare ground 2 years after initial application, the infestation will gradually re-establish to pre-treatment levels.

Where flupropanate is used as a spot treatment in scattered infestations, there is the potential for seed to germinate anywhere around the infestation and annual follow-up is required until the seed bank is exhausted or vigorous competition is established.

A previous Southern Beaches Landcare/Coastcare project involved the planting of she-oaks (*Allocasuarina verticillata*) within the serrated tussock infestation on the north west of the island, to shade-out and out-compete the tussock. This has been extremely effective and the areas with dense establishing she-oak have very little serrated tussock under them and the tussock that is present is weak and unlikely to produce seed.

Within the main infestation in the north west there remain several large open areas currently still dominated by serrated tussock. Whilst these have just been treated, there is very little potential for them to be colonised by an effective competition naturally in the next 2 years. The most effective long-term solution for the management of these areas is to plant them out densely with she-oaks. She-oak seed from the island was collected on this trip to allow for the propagation of local provenance tubestock. Funding should be sought to support a revegetion project in this area. The water drums if still present could be used for watering in of the tubestock.

The other infestations are less suited to revegetation using she-oaks, the middle ones because they already have a good cover of native shrubs and are likely to decline naturally and the one in the north east and the one on the southern end are unsuitable due to their proximity to penguin/shearwater colonies. These infestations should continue to be managed using flupropanate. The southern infestation could be revegetated using native tussock grasses, such as *Poa* plugs, due to the current extensive patches of serrated tussock.