

Sea Spurge (*Euphorbia paralias*)
Annual Operational Report
2019/2020



Prepared by:
Frances McKinnon
C G Hale Ltd contractor to Waikato Regional Council

Prepared for:
Ministry of Primary Industries Contact for Services 16738 *Sea spurge (Euphorbia paralias)*
eradication response at Aotea, Waikato. September 2013

1. Introduction

Sea spurge was discovered in 2012 at a remote location three kilometres north of Potahi Point and the Aotea Harbour entrance on the west coast of the Waikato region, this site is known as the detection site. Until 2019 this was the only known sea spurge infestation in New Zealand.

Sea spurge is a hardy European shrub that invades and thrives in coastal dune environments. It's seeds float and can be carried by ocean currents. It is probable the sea spurge infestation in Aotea originated from seed that floated from Australia.

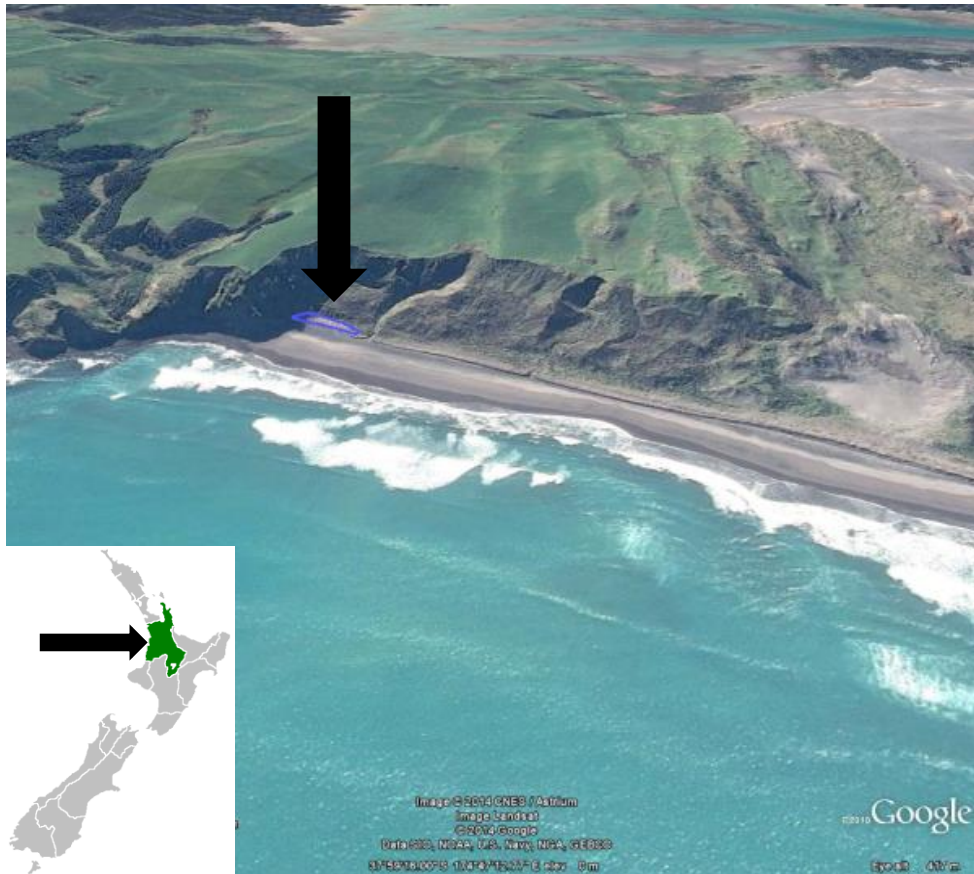
Sea spurge has caused major environmental problems in Australia. It was first found in Western Australia and has since spread throughout the south-east coastline, including Tasmania and the islands of Bass Strait, and on the beaches of New South Wales coastline. It is believed sea spurge was introduced to Australia in ship ballast water.

Sea spurge is a highly invasive dune shrub, it forms dense stands in the foredune and backdune environments displacing native plants and animals and changing sand movement patterns. Sea Spurge poses a serious threat to New Zealand's dune systems.

A working group has been established to collaboratively manage and eradicate sea spurge in New Zealand. This group is led by the Ministry of Primary Industries (MPI) and includes the Waikato Regional Council (WRC) and Department of Conservation (DoC). The group plans to prevent further seed production by maintaining the infestation site at zero density and exhausting the seed bank. The detection site is a dynamic coastal environment where the risk of erosion and movement of materials from the site is high. For this reason, the coastline 15km north and south of the infestation is also surveyed for sea spurge.



Picture one: Original infestation site, known as the detection site, picture taken in January 2020.



Picture two: location of the detection site at the north end of Aotea Beach.



Picture three: Detection site with search area outlined.

2. 2019/2020 Season Detection Site Inspections and Delimiting Survey

1	Thursday 19 September 2019	Inspection of detection site
2	Thursday 21 January 2020 Monday 3 February 2020 Friday 21 February 2020	Inspection of detection site and delimiting survey from detection site to Potahi Point and Schnackenberg Bay Delimiting survey from Kawhia township to Aotea township Delimiting survey at Ruapuke Beach and unnamed bay directly south of Ruapuke Beach
3	June 2020	Inspection of detection site

2.1 Detection site inspection – 19 September 2019

The detection was inspected on 19 September 2019. The site, outlined in picture three, was grid-searched by pest plant officers (PPOs). No sea spurge was found.



Picture four: Map showing track logs from first inspection of the detection site in 2019-2020 season.

2.2 Detection site inspection & delimiting survey from detection site to Potahi Point and Schnackenberg Bay – 21 January 2020

The detection site was inspected again on 21 January 2020, PPOs grid-searched the area (picture six). No Sea spurge was found. PPOs also surveyed the beach south of the detection site as far as Potahi point and Schnackenberg Bay, north of the detection site, on the same day. Track-logs are shown in picture five. No sea spurge was found.



Picture five: Map showing PPO track-logs from 21 January 2020 visit to the detection site and delimiting survey of Schnackenberg Bay and the beach island south of the detection site.



Picture six: PPO grid-searching the detection site January 2020.

2.3 Delimiting survey Kawhia to Aotea – 3 February 2020

PPOs surveyed the coastline from Kawhia township to Aotea township on 3 February 2020. No sea spurge was found.



Picture seven: PPO track-logs showing delimiting survey from Kawhia to Aotea.

2.4 Delimiting survey Ruapuke Beach – 21 February 2020

PPOs and Waikato Regional Council Summer Students surveyed Ruapuke Beach and the unnamed beach directly south of Ruapuke Beach on 21 February. No sea spurge was found.



Picture eight: PPO track-logs showing delimiting survey from northern end of Ruapuke Beach to the headland at Schnackenberg Bay.

2.5 Detection site final 2019/2020 season inspection – June 2020

PPOs carried out the final inspection at the detection site on 12 June 2020. The detection site was grid searched; no sea spurge was found. PPOs noted during this inspection that there has been some erosion at the detection site, this highlights the potential for seed to move down the coast with beach debris.



Picture nine: Map with PPO track-logs of the final detection site inspection for the 2019-2020 season.

3. Risks and recommendations

No sea spurge was found in the Waikato in the 2019-2020 season. This is the second consecutive season no sea spurge has been found in the eradication response area at Aotea. Sea spurge has however been found at two sites south of the Aotea area in the past two seasons. One site has been identified in Mokau near the Waikato and Taranaki Regional boundary and one site in the Horizons Regional Council area. These new finds reinforce the importance of continued surveillance for sea spurge along the western coastline. Erosion at the detection site has also highlighted the potential for any sea spurge seed present to be spread down the coastline, further reinforcing the need for an active surveillance programme.