

# Gunnera hamiltonii – Compilation of information

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## Introduction

There have been several reports made on *Gunnera hamiltonii* over many years. These reports include field work undertaken. This report attempts to record some of the key information recorded including discover, sex of plants, site information, transplants undertaken and a bibliography. It is intended that this compilation of information will compliment a recent (July 2024) field trip made to visit all known sites, to GPS sites and make genetic collections.

## Discovery

Oreti River plant: *Gunnera hamiltonii* was first discovered by Mr W. S. Hamiltonii. The location of the first *G. hamiltonii* plant found was described as “Hills near the New River Heads, 300ft” (W. S. Hamilton, 1884) and also “Hills near the mouth of the Oreti River, Southland” (T. Kirk, 1894). This plant appears to have faded from knowledge however was assumed to have been the Oreti River plant, however the description probably better fits the Three Sisters dune plant.

This plant was “rediscovered” in the 1920’s by Mr C. M. Smith (A. B. Fisher 1972). This plant is discussed in a paper entitled “Plant succession on the Oreti River sand dunes (M. C. Logan & J. E. Holloway, 1933). Fisher (1972) states that the plant was “all but extinct”.

Omaui plant: This plant was discovered in 1987 by Brian Patrick. This plant may be the first known site for *G. hamiltonii* rather than the Oreti River plant.

Mason Bay plant: The Mason Bay Plant was (the second plant found?) was found by Mr W. Traill. There is reported to have been two natural plants (H. D. Wilson, 1985). One of these is the Duck Creek population. The other plant was on an old sand ridge near Island Hill which was found by Tim Tika. This plant has not been recorded since 1985. There is also a transplant from the Duck Creek plant at Mutton Flat, that remains.

## Doughboy Bay:

Northern Doughboy plant (= “Doughboy” or Original/First Doughboy Bay plant): The first Doughboy plant was found by Lon Johnson in 1986. This plant has been referred to as “Doughboy” it is the northern original plant, located on a stable dune at the back of the dune, south of the Doughboy cave.

Central Doughboy Bay plant (= “Doughgirl” or second Doughboy Bay plant): This plant was found by Pete Shaw in 1995. This plant has been referred to as “Doughgirl”. This was found on dunes between two small creeks, north of the mouth of Doughboy River. This plant was eroded away by Doughboy River, however material is in cultivation and has been used in transplants on Doughboy Bay.

Southern Doughboy Bay plant (= "Doughit" or third Doughboy Bay plant): This plant was found by Brian and Chris Rance in 1998. This plant has been known as "Doughit" as its sex was not known. This plant was found in the north part of the Central Doughboy dunes (i.e. true right or north of the Doughboy River).

West Ruggedy plant: This plant appears to have been discovered in 1989.

There is still the possibility of discovering new plants.

### **Sex of plants**

Three Sisters Dune – Female

Oreti Dunes plant – Female

Mason Bay Plant – Male

West Ruggedy - Female?

Northern Doughboy Bay plant – Male

Central Doughboy Bay plant – Female

Southern Doughboy Bay plant - Female???

It is thought that of the 7 original plants that 2 are male and 5 are female. Genetic analysis may be able to confirm the sex of each known plant.

### **Site information**

#### Doughboy Bay:

Northern Doughboy Bay plant:

Sex = Male

Location: Northern Doughboy Dune (i.e. north of the mouth of Doughboy River and other streams. It is south of a rocky point, which is south of the Doughboy cave.

Site description: An old, stable dune ridge, behind the active younger dune area. The area covered is generally the summit of the dune ridge, however in places it does extend down the seaward face of the dune ridge.

Associated vegetation: The summit of the dune ridge was dominated by grasses/litter (c. 35% cover), moss (30%) and flax (18%), with some club rush (5%), silver tussock 4%), marram grass (3%), mingimingi (3%), bush lily (1%), Coprosma acerosa and a few other species. The back of the dune ridge is dense mingimingi and flax.

The coastal dune face of the dune is dominated by marram grass and much bare sand.

Extent (October 1995): 100+m x 3 (0-25m)

Central Doughboy Bay plant: The original Central has been lost to river/coastal erosion.

Southern Doughboy Bay plant: The recent (June 2024) inspection did not undertake a ground inspection, however an aerial inspection indicated that the area where this plant was located was now active sand dune. It is highly possible that this plant has been lost to sand movement as a consequence of marram grass removal.

Mason Bay: The remaining original plant grows along the semi-stable dune margin to the south-east of the Mason Bay hut.

West Ruggedy: The original plant is confined to a gravelfield area within more active sand dune.

### **Transplants undertaken**

Oreti River plant: A transplant was undertaken by Roger Sutton to an old gravel pit area within pine forest near the junction of Pit Road with Sandy Point Road. I remember being shown this site by Roger in the late 1980's. At that time there were small patches of gunnera remaining, and was in decline and was suffering from grass invasion. I did visit the site into the early 1990's and did undertake some release spraying. It slowly dwindled to scattered rosettes and eventually disappeared. Therefore, this plant is only now found in ex-situ collections.

Mason Bay: The Mutton Flat site is a transplanted site undertaken by Tim Tika, c. 1980. This plant persists, having spread across a relatively large area. The site is relatively stable and shrub invasion is occurring. It is likely the cover of the gunnera will decline in future.

Doughboy Bay: There have been many transplants undertaken over a long period.

Transplant 1: Undertaken in 1995 (by B Rance). A piece 35 x 15cm (26 rosettes) from Northern Doughboy plant (= "Doughboy" or Original/First Doughboy Bay plant) undertaken in October 1995. The transplant site was into an area of flat mossy dune, with sparse marram. The site was north of the original plant and c. 130m south of the cave. It was c. 8m from a rock point. This plant was thought to be Plant 3 found in June 2024, however this plant may have merged with nearby transplants by L Maria.

Transplant 2: Undertaken 1995 by B Rance. A piece 25 x 12cm (26 rosettes) from Central Doughboy Bay plant (= "Doughgirl" or second Doughboy Bay plant) undertaken in October 1995. The transplant site was into an area of flat mossy dune, with sparse marram. The site was a north facing area containing *Gaultheria macrostigma* over moss. The site was the south end of the southern dune (i.e. true right or south side of Doughboy River), at the back of the dune halfway between a bend in the creek and a sculptured rock. This plant is Plant 1 found in June 2024.

Transplants of Central Doughboy Bay plant (= "Doughgirl" or second Doughboy Bay plant) undertaken in October 1997 and 98 by Morecraft, Nieuwenhuyse and Chadderton. The approximate location of these transplants was shown on maps in Rance 1998. These appear not to have survived (at least some did not survive transplanting), they were not located in 2024.

Transplants undertaken by Lisa Maria as part of her MSC project in 1998. These were from both the original male and female Doughboy Bay plants. These transplants were in 3 areas shown on maps in Rance 1998 – a) near the creek at the south end of the northern dune. This plant could not be found in 2024; b) near the cave (north of Rance transplant 1). Note this could be Plant 3 found in June 2024; c) near the location of the current Hut. Note this could be Plant 4 and/or 5 found in June 2024.

West Ruggedy: Two transplants were made from the original West Ruggedy plant in 1997. These transplants were 7.8m apart. A subsequent inspection in 1998 found only one plant. This plant was relocated in July 2024.

Fortrose Spit: A translocation to Fortrose Spit was made in 2004. This translocation was not successful.

### **Plants in cultivation**

Southland Community Nursery:

Mason Bay plant

Northern Doughboy plant (= "Doughboy" or Original/First Doughboy Bay plant)

Central Doughboy Bay plant (= "Doughgirl" or second Doughboy Bay plant)

Additional plants of unknown provenance (i.e. labels have been lost or illegible)

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