

FILECORP



L014007



# Threatened Plants of South Marlborough

## A Field Guide

Nelson/Marlborough Conservancy August 2002



Department of Conservation  
*Te Papa Atawhai*

# Threatened plants of South Marlborough

## A Field Guide

by Cathy Jones and Ingrid Hutzler

Published by:

Department of Conservation  
Nelson-Marlborough Conservancy  
Private Bag 5, Nelson, New Zealand

Occasional Publication No 53.

August 2002, © Department of Conservation

ISSN 0113-3853

ISBN 0-478-22230-0

Bibliographic Reference:

Jones, C. and Hutzler, I. 2002. Threatened plants of South Marlborough. A Field Guide. Department of Conservation, Nelson/Marlborough Conservancy. Occasional Publication No. 53.

Cover Illustration:

*Euphorbia glauca*. Photo Shannel Courtney.

# Contents

*Page*

<u>Acknowledgements</u>	<u>i</u>
<u>Map</u>	<u>ii</u>
<u>Introduction</u>	<u>iii</u>
<u>Threatened plants of South Marlborough</u>	<u>1</u>
Buttercup family	2
Cabbage family	6
Carrot family	22
Chickweed family	28
Coffee family	30
Daisy family	34
Dock family	66
Fathen family	68
Forget-me-not family	72
Foxglove family	84
Fuchsia family	92
Gentian family	98
Grass family	100
Heath family	112
Ivy family	114
Leafy mistletoe family	116
Mint family	124
Nettle family	126
Pea family	128
Pittosporum family	144
Rush family	146
Sedge family	148
Spurge family	160
Stonecrop family	162
Verbena family	164
Violet family	166

---



# Contents continued

*Page*

Selected bibliography 169

Common name index 171

Scientific name index 174



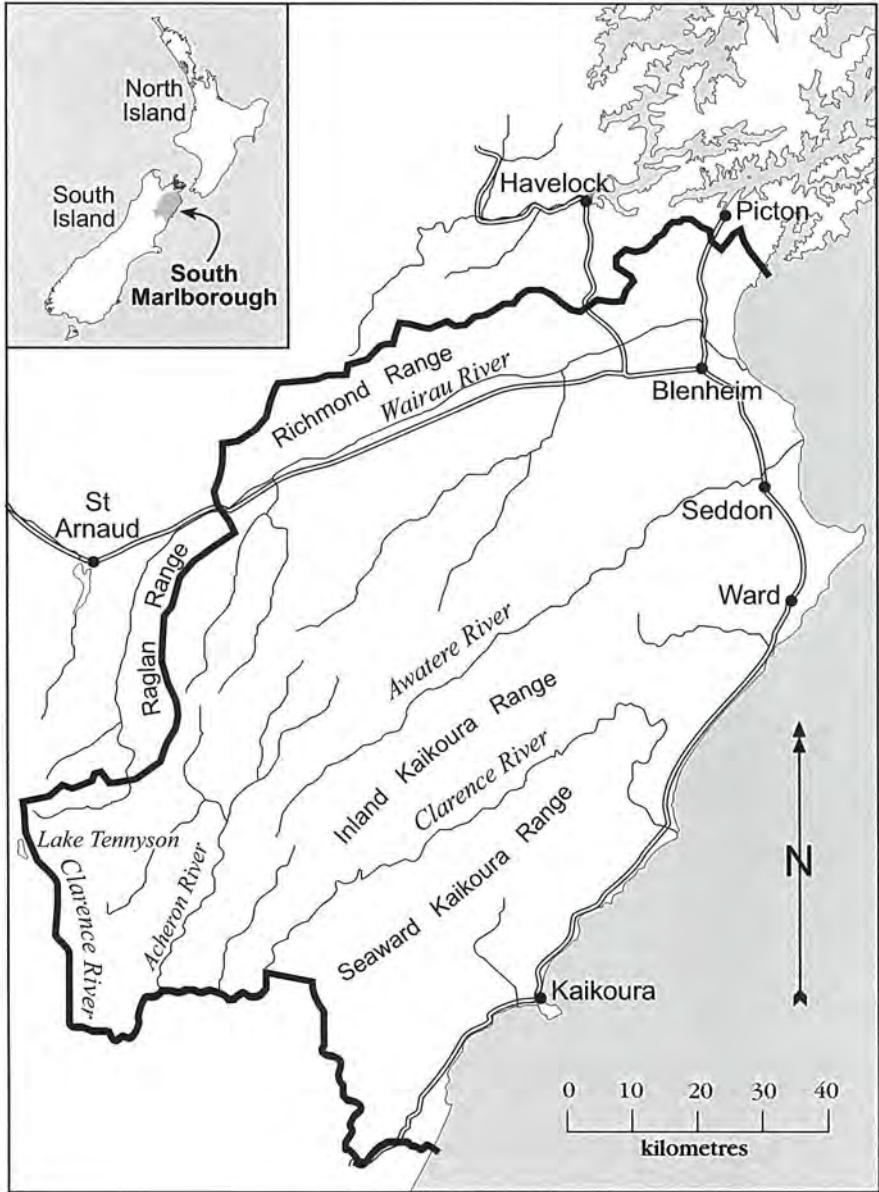
## Acknowledgements

Our appreciation goes to the many people who have contributed to the publishing of this book. Firstly to the DOC botanists who gave the project their backing, thereby postponing production of their own conservancy field guides. Many also provided information and photographs. Secondly to DOC for providing funding. Thirdly to Speedy Print in Nelson and in particular Paul, who gave us access to his equipment as well as his time and technical advice.

Robin Blackmore encouraged the idea of a book and boosted our morale when it seemed impossible. Shannel Courtney shared with us his knowledge of plants and of South Marlborough. Keryn Squires and Fiona Shaw worked on the early stages of the project. Garry Holz provided the map, as well as printing and publishing expertise. Jan Clayton-Greene was supportive of side-trips for photography, when we were working on other things, and helped with proofing. Landcare Research at Lincoln gave us access to dried specimens of the plants we were unable to photograph in the wild. We are grateful for Brian Molloy's review of the book, particularly because of his familiarity with the region and its plants.

Without photographs this book would not exist. Our sincere thanks to all those who contributed photos: John Barkla, John Barren, Julia Brooke-White, Martin Clapham, Jan Clayton-Greene, Shannel Courtney, Andy Dennis, DOC South Marlborough, Chris Ecroyd, Nick Head, Peter Johnson, Sandra Jones, Robert Lamberts, John Lovis, Bill Malcolm, Barbara Mitcalfe, Brian Molloy, Simon Moore, Mike North, David Norton, David Oberdries, Colin Ogle, Jill Rapson, Alastair Robertson, Jeremy Rolfe, John Sawyer, Tony Silbery, Neill Simpson, John Smith-Dodsworth, Andrew Townsend, Dave Walford and Guyon Warren.

# South Marlborough



## Introduction

South Marlborough has a special character because of its geology and dry climate. This has led to the evolution of a large number of specialised plants. Many of these plants are endemic to the region, meaning that they grow only here and nowhere else in the world. Some of these endemic plants are classified as nationally threatened. In addition, the region is home to other threatened plants, which also grow elsewhere in the country. This book is designed as a simple field guide to the threatened plants of South Marlborough.

About one fifth of New Zealand's native plants are considered to be under some degree of threat. So that work on preventing extinction of threatened plants can be prioritised, a classification system has been set up (see Bibliography, page 169). It puts all New Zealand plants into one of fourteen categories according to their degree of threat.

The plants included in this book belong to six of these categories. The "Nationally critical", "Nationally endangered", and "Nationally vulnerable" categories contain species which are considered to be acutely threatened. Those in the "Serious decline" and "Gradual decline" categories are threatened over the longer term. The "Data deficient" category covers those which are believed to be threatened, but there is not enough information to place them into one of the above categories.

The 83 species covered in this book have been grouped under families, which are alphabetically arranged. Scientific plant names used include officially published names where these are available, and otherwise tag names which are unpublished but in common use. Common names have been drawn from a variety of sources.

## **Introduction**    continued

In some cases habitat descriptions included here apply only to South Marlborough populations. The plant may live in other habitats elsewhere in the country.

One of the tasks of the Department of Conservation is working with others to prevent the extinction of plants. A very necessary first step, before assessing what is needed to enable threatened plants to survive in the wild, is knowing what they are, where they occur and in what numbers. It is hoped that this book will provide sufficient information for people to be able to recognise and appreciate these special plants.

If people wish to inform the Department of Conservation about plants they have found, they should contact the South Marlborough Area office in Renwick (Phone 03 572 9100), the Kaikoura Field Centre (Phone 03 319 5714) or one of the botanists at the Nelson-Marlborough Conservancy (Private Bag 5, Nelson, Phone 03 546 9335).

**Threatened plants of  
South Marlborough**

<b>Family name</b>	<b>Buttercup family (Ranunculaceae)</b>
<b>Scientific name</b>	<b><i>Myosurus minimus</i> ssp. <i>novae-zelandiae</i></b>
<b>Common name</b>	<b>New Zealand mousetail</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Small, hairless, tufted annual herb, 2-8cm tall, which dies down after seeding. Leaves very narrow, linear to narrowly spoon-shaped, up to 35mm long, 1-2mm wide. Flower stalks several, 2-10cm tall, each with a terminal spike of minute flowers. Flowers greenish-yellow, small. Seed head dry, 3-8mm long, ripening to brown as leaves wither.
<b>Habitat</b>	Lowland to upland. Damp and slightly salty depressions in pastures and short tussock grassland, dune hollows, gravel flats, alluvium.
<b>Associated plants</b>	Introduced weeds, such as scarlet pimpernel, sheep sorrel, spring speedwell, <i>Myosotis discolor</i> .
<b>Similar species</b>	<i>Plantago</i> species.
<b>Distinguishing features</b>	Mousetail is finer than <i>Plantago</i> species. The smaller species of <i>Plantago</i> have fewer seeds per head.
<b>Distribution</b>	Cook Strait shores to Lake Manapouri, east of the main divide, very local.



Photos: John Barkla



Photo: Neill Simpson



Photo:  
Bill Malcolm



<b>Family name</b>	<b>Buttercup family (Ranunculaceae)</b>
<b>Scientific name</b>	<b><i>Ranunculus limosella</i></b>
<b>Common name</b>	<b>Mud buttercup</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Small perennial herb. Leaves in rosettes, tufted along a slender, creeping, buried stem; linear to spoon-shaped, not toothed, hairless, with long stems, up to 14cm long when permanently submerged. Flowers yellow to purple, solitary, 6-8mm diameter, with 4 linear petals and 4 spreading sepals; on stalks 1-2cm tall.
<b>Habitat</b>	Lowland to upland, up to 750m altitude. On margins of swamps, lakes, tarns and streams, often submerged or in mud.
<b>Associated plants</b>	<i>Limosella lineata</i> , <i>Crassula sinclairii</i> , <i>Glossostigma elatinoides</i> , <i>Myriophyllum propinquum</i> .
<b>Similar species</b>	<i>Limosella lineata</i> .
<b>Distinguishing features</b>	Leaves of <i>Ranunculus limosella</i> are linear to spoon-shaped, slightly curved, with a smaller leaf sheath than <i>Limosella lineata</i> , which has purely linear leaves. Other buttercups have toothed or lobed leaves. <i>Ranunculus limosella</i> has buried stems, while <i>Limosella lineata</i> stems creep along the surface.
<b>Distribution</b>	North and South Island.



Photos: Colin Ogle

<b>Family name</b>	<b>Cabbage family (Brassicaceae)</b>
<b>Scientific name</b>	<b><i>Cardamine</i> “tarn”</b>
<b>Common name</b>	<b>Turf cress</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	A very small, short lived cress, forming loose rosettes or tufts on a scrambling, thin stem, 2-6cm long. Leaves, 2-5mm long, 1-4mm wide, may be lobed half way to the midrib; leaf stalks usually hairy. Flowers white, 1-3mm in diameter, appearing spasmodically during late spring and summer. Capsule 10mm long, 1mm wide; opens explosively. Opportunistic plant germinating, growing and maturing quickly when water levels drop, exposing suitable mud surfaces.
<b>Habitat</b>	Seasonal mud surfaces, turf margins and muddy hollows of upland streams and tarns, especially fertile ephemeral wetlands.
<b>Associated plants</b>	<i>Myriophyllum votschii</i> , <i>Liliaeopsis ruthiana</i> , <i>Limosella lineata</i> , <i>Epilobium angustum</i> .
<b>Similar species</b>	Other <i>Cardamine</i> species.
<b>Distinguishing features</b>	Very small size, relatively simple leaves, often brown-coloured.
<b>Distribution</b>	Eastern South Island, Upper Wairau.

Photo: Cathy Jones



Photo: Shannel Courtney



<b>Family name</b>	<b>Cabbage family (Brassicaceae)</b>
<b>Scientific name</b>	<b><i>Cardamine aff. bilobata</i></b>
<b>Common name</b>	<b>Native bittercress</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Small, low growing herb with solitary rosettes of leaves. Leaves not lobed, with long stems arising directly from root. Flower stems to 200mm tall. Flowers small, white, with four petals. Seeds in long narrow pods.
<b>Habitat</b>	Rocky places on ridges, cliffs in beech forest and among herbs on stream margins.
<b>Associated plants</b>	Tall tussock.
<b>Similar species</b>	<i>Cardamine bilobata</i> .
<b>Distinguishing features</b>	<i>Cardamine aff. bilobata</i> has unlobed leaves. <i>C. bilobata</i> has leaves with three lobes.
<b>Distribution</b>	Eastern South Island.





Photo: Ingrid Hutzler



Photo: Cathy Jones

<b>Family name</b>	<b>Cabbage family</b> (Brassicaceae)
<b>Scientific name</b>	<b><i>Cardamine bilobata</i></b>
<b>Common name</b>	<b>Native bittercress</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Low growing herb with single rosettes or in small clumps. Leaves deeply three lobed, sometimes with additional pair of leaflets; dull green to purplish, thin, fleshy, hairless. Flower stems sparsely branched, hairless, up to 30cm tall. Flowers large, white, about 8mm across, 4-petalled, with 6 stamens. Seeds about 1mm long, pale brown, oblong, in slender linear pods up to 2.5cm long.
<b>Habitat</b>	Mainly low alpine 900-1,500m altitude. Usually in fellfield, on moraine or scree edges, or rock crevices, also damp places in tussock grassland.
<b>Associated plants</b>	Snow totara, snow tussock, red tussock, bristle tussock.
<b>Similar species</b>	<i>Cardamine corymbifera</i> , <i>C. aff. bilobata</i> .
<b>Distinguishing features</b>	<i>C. bilobata</i> has leaves with three lobes, larger flowers and longer fruits than <i>C. corymbifera</i> . <i>C. aff. bilobata</i> has unlobed leaves.
<b>Distribution</b>	South Island: north-west Nelson and east of the main divide.



Photos: Cathy Jones



<b>Family name</b>	<b>Cabbage family (Brassicaceae)</b>
<b>Scientific name</b>	<b><i>Cheesemanina</i> aff. <i>fastigiata</i> "Chalk Range"</b>
<b>Common name</b>	<b>Chalk cress</b>
<b>Threat category</b>	Nationally critical.
<b>Description</b>	Perennial herb, 10-15cm tall, with a flower stalk up to 25cm. Leaves leathery, semi-succulent strap-like, hairless and untoothed (very occasionally slightly toothed), approximately 5cm long, 0.5cm wide; forming a single rosette on a large root which extends from the ground, giving plant the appearance of a tiny palm tree. It grows for several years before sending up a sturdy flower stalk with clusters of flowers, each with 25-50 typical cress flowers. Once a plant has flowered, it usually dies. Seed capsules approximately 3-4cm long, 1.5mm wide, containing 10-15 seeds. Capsules open explosively, ejecting seed.
<b>Habitat</b>	Semi-stable, steep south-facing cliffs or rocky bluffs, which are sparsely vegetated. Plants root into cracks in limestone.
<b>Associated plants</b>	<i>Leptinella pyrethrifolia</i> , <i>Poa acicularifolia</i> .
<b>Similar species</b>	<i>Cheesemanina fastigiata</i> , <i>C. stellata</i> , <i>C. enysii</i> .
<b>Distinguishing features</b>	<i>C. aff. fastigiata</i> "Chalk Range" has untoothed leaves. <i>C. fastigiata</i> has sharply-toothed leaves. <i>C. stellata</i> has regularly blunt-toothed leaves, covered in star-shaped hairs. <i>C. enysii</i> has short flower stems.
<b>Distribution</b>	Restricted to limestone ranges, inland South Marlborough.

Photos: Shannel Courtney

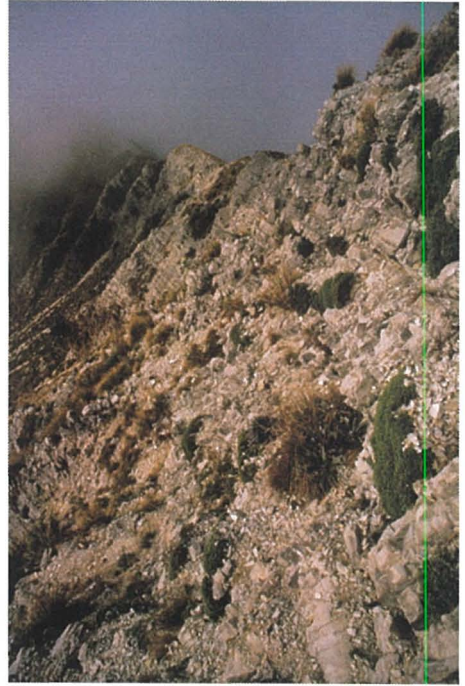


Photo: David Oberdries

<b>Family name</b>	<b>Cabbage family (Brassicaceae)</b>
<b>Scientific name</b>	<b><i>Cheesemaniania enysii</i></b>
<b>Common name</b>	<b>High alpine cress</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Low herb up to 10cm tall. Base of stem fleshy, about 1.5cm diameter, crowned by a rosette of leaves. Leaves toothed, about 4cm long, 1.5cm wide, oblong to spoon-shaped, covered with branched hairs. Flower stems short and branched. Flowers white, 4-petalled, up to 10mm across. Pods narrow-linear, about 2.5-3.5cm long, 2mm wide. Seeds less than 1mm long.
<b>Habitat</b>	High alpine rock crevices, on drier mountains.
<b>Associated plants</b>	<i>Raoulia bryoides</i> , <i>Haastia pulvinaris</i> , alpine grasses, <i>Colobanthus</i> species.
<b>Similar species</b>	<i>Cheesemaniania fastigiata</i> , <i>C. stellata</i> .
<b>Distinguishing features</b>	Leaves in <i>C. enysii</i> have a mix of forked and star-shaped hairs. <i>C. fastigiata</i> leaves are hairless and sharply toothed, <i>C. stellata</i> leaves are shallowly lobed and have star-shaped hairs. The flower head in <i>C. enysii</i> is dense and on short stems. Other <i>Cheesemaniania</i> species have longer flower stems.
<b>Distribution</b>	South Island: north and east of Southern Alps.

Photo: Cathy Jones



Photo: Dave Walford



Photo: Shannel Courtney





<b>Family name</b>	<b>Cabbage family</b> (Brassicaceae)
<b>Scientific name</b>	<b><i>Cheesemanian fastigiata</i></b>
<b>Common name</b>	<b>Hairless cress</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Herb with stout base, up to 1.8cm diameter, crowned by dense rosettes of hairless, fleshy leaves. Leaves up to 7cm long, deeply toothed. Flower head, up to about 35cm tall, with simple or branched stems. Flowers white, 4-petalled, up to 8mm across. Seed pods narrow, 4cm or more long, 1.5-2mm wide, curved to straight. Seeds 1-1.5mm long.
<b>Habitat</b>	On upland to subalpine rocks of drier interior mountains.
<b>Associated plants</b>	<i>Raoulia bryoides</i> , <i>Colobanthus</i> species, <i>Raoulia eximia</i> .
<b>Similar species</b>	<i>Cheesemanian enysii</i> , <i>C. stellata</i> , <i>C. aff. fastigiata</i> "Chalk Range".
<b>Distinguishing features</b>	<i>C. fastigiata</i> is hairless, has sharply toothed leaves and tall flower stems. <i>C. enysii</i> and <i>C. stellata</i> have hairy leaves. <i>C. enysii</i> has short flower stems. <i>C. aff. fastigiata</i> "Chalk Range" is untoothed.
<b>Distribution</b>	South Island: east of Southern Alps, from Marlborough to northern Southland.



Photo: Cathy Jones

Photo: Sandra Jones

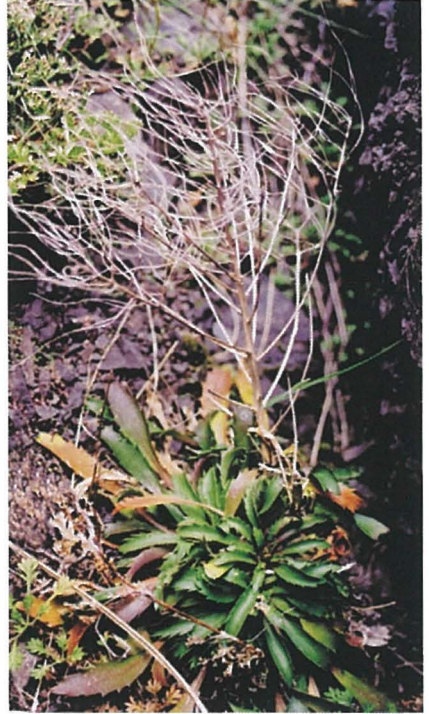


Photo: Cathy Jones



<b>Family name</b>	<b>Cabbage family (Brassicaceae)</b>
<b>Scientific name</b>	<b><i>Cheesemaniania stellata</i></b>
<b>Common name</b>	<b>Starry cress</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	Perennial herb forming a densely leaved rosette. Leaves densely covered in star-shaped groupings of hairs; grey-green, lance-shaped, 20-80mm long, 5-10mm wide; with regular shallow lobes. Flowers white, in clumps, on stems 15-35cm tall. Seed capsule narrow, 5cm long.
<b>Habitat</b>	Upland to subalpine rocks, on ledges, crevices, cracks and overhanging bluffs. Often found on shaded, south-facing sites.
<b>Associated plants</b>	<i>Colobanthus</i> species, <i>Poa colensoi</i> .
<b>Similar species</b>	<i>Cheesemaniania enysii</i> , <i>C. fastigiata</i> , and <i>C. aff. fastigiata</i> "Chalk Range".
<b>Distinguishing features</b>	<i>C. stellata</i> has grey-green leaves with shallow regular lobes, dense star-shaped hairs and long flowering stems. <i>C. fastigiata</i> has sharply-toothed leaves. <i>C. aff. fastigiata</i> "Chalk Range" is untoothed. <i>C. enysii</i> has short flower stems.
<b>Distribution</b>	South Marlborough and Inland Kaikoura Ranges, Upper Awatere.



Photos: Cathy Jones

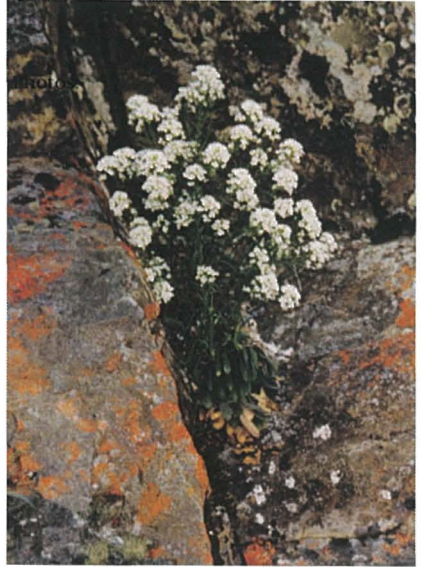
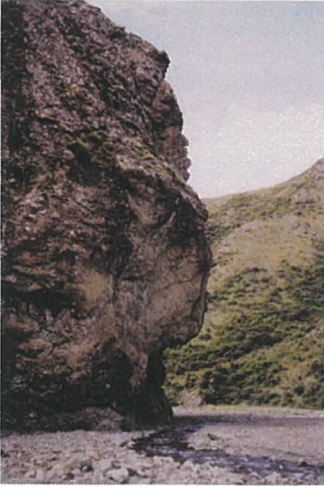


Photo: Shannel Courtney





<b>Family name</b>	<b>Cabbage family</b> (Brassicaceae)
<b>Scientific name</b>	<b><i>Ischnocarpus novae-zelandiae</i></b>
<b>Common name</b>	<b>Dryland cress</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Rosette-forming, perennial herb. Leaves up to 10cm long, usually shorter, unlobed to shallow lobed, clad in star-shaped hairs. Stems up to 30cm tall, slender, stiff and sparingly branched. Flowers white, in long slender clusters. Seed pods smooth and virtually straight. Seeds tiny and light-brown.
<b>Habitat</b>	Lowland to upland open tussock-grassland, bare places and unstable screes, dry sheltered cliffs, scrub. Often underneath snow totara.
<b>Associated plants</b>	Snow totara, <i>Leucopogon suaveolens</i> , tauhinu.
<b>Similar species</b>	Other cress species.
<b>Distinguishing features</b>	Dryland cress has hairy leaves and stems and is less robust than <i>Cheesemaniania</i> species.
<b>Distribution</b>	South Island: east of the main divide.

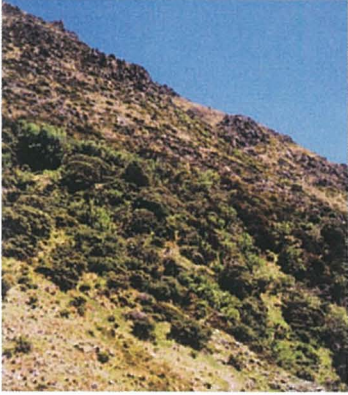
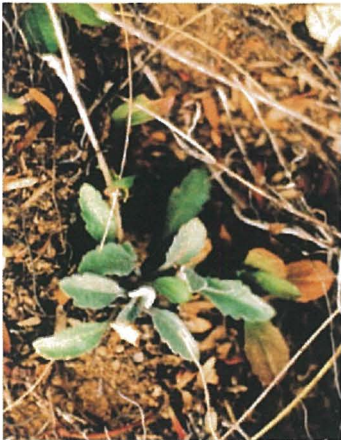


Photo: Jan Clayton-Greene

Photo: John Barkla



Photo: Jan Clayton-Greene

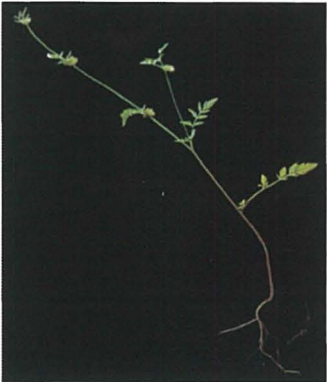


<b>Family name</b>	<b>Carrot family (Apiaceae)</b>
<b>Scientific name</b>	<b><i>Daucus glochidiatus</i></b>
<b>Common name</b>	<b>Native carrot</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	Erect annual or biennial herb, up to 30 cm tall. Stems and branches hairless. Leaves hairless or clad in stiff hairs. Basal leaves divided 2-3 times into linear lobes, stem leaves similar but smaller. Irregular umbrella-shaped flower heads with 1-8 flowers, white or tinged red, 1mm diameter. Fruit with small sharp spines about 1mm long. Seeds dark brown, oblong, 3-5mm long.
<b>Habitat</b>	Lowland open places, short tussockland or grassland and under forest margins.
<b>Associated plants</b>	Grasses, introduced herbs.
<b>Similar species</b>	<i>Daucus carota</i> (introduced).
<b>Distinguishing features</b>	<i>D. glochidiatus</i> is smaller than <i>D. carota</i> , with irregular flower heads. <i>D. carota</i> has large umbrella-shaped flower heads, 2-15cm across.
<b>Distribution</b>	North and South Island.



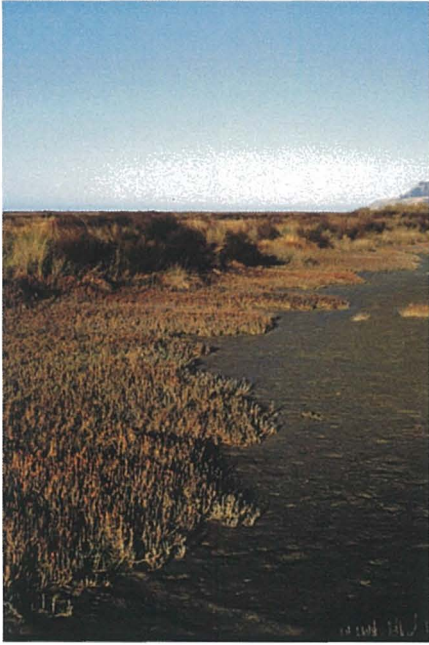
Photos: Cathy Jones

Photo: Barbara Mitcalfe



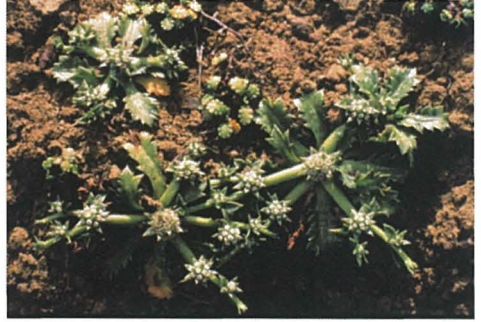
<b>Family name</b>	<b>Carrot family (Apiaceae)</b>
<b>Scientific name</b>	<b><i>Eryngium vesiculosum</i></b>
<b>Common name</b>	<b>Sea holly</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Tufted perennial herb, which produces underground runners and offset plants, forming patches. Leaves of 2 forms: winter leaves linear, cylindrical; summer leaves spoon-shaped. Leaves pale green to bronze, thick, coarsely toothed or lobed, 5-12cm long. Flowers whitish, 1-3mm diameter, in a spiny cluster 1-2cm diameter.
<b>Habitat</b>	Coastal, especially on wet gravel or sand fringing coastal lagoons and lakes. Rarely inland.
<b>Associated plants</b>	Sea rush, manuka, marsh ribbonwood, knobby club rush.
<b>Similar species</b>	No similar species in South Marlborough.
<b>Distinguishing features</b>	Sea holly is a very distinctive plant, glasswort.
<b>Distribution</b>	Southern North Island to North Otago.





Photos: Cathy Jones

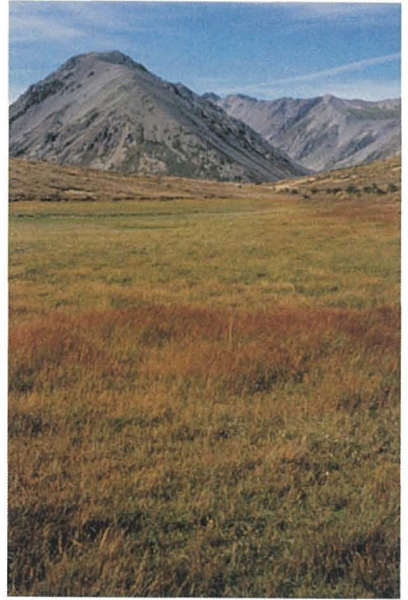
Photo: Shannel Courtney



<b>Family name</b>	<b>Carrot family</b> (Apiaceae)
<b>Scientific name</b>	<b><i>Oreomyrrhis colensoi</i> var. <i>delicatula</i></b>
<b>Common name</b>	<b>Delicate myrrh</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Tufted herb up to 5cm tall. Leaves narrow-oblong, with deeply toothed leaflets, on fine stems. Flowers arranged in small umbrella-shaped bunches. Flower stems up to 25mm long. Fruit hairless, 2mm long.
<b>Habitat</b>	Ephemeral wetlands, subalpine flushes.
<b>Associated plants</b>	<i>Hypsela rivalis</i> , <i>Leptinella pusilla</i> , <i>Carex gaudichaudiana</i> , <i>Viola cunninghamii</i> .
<b>Similar species</b>	<i>Oreomyrrhis</i> "bog".
<b>Distinguishing features</b>	<i>O. colensoi</i> var. <i>delicatula</i> leaflets are sharply pointed and symmetrical about the mid vein. <i>Oreomyrrhis</i> "bog" leaflets are simpler and asymmetrical.
<b>Distribution</b>	North and South Island.



Photo: Colin Ogle



Photos: Cathy Jones

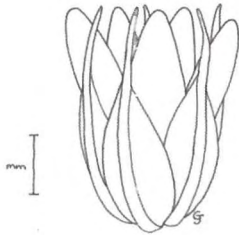




<b>Family name</b>	<b>Chickweed family</b> (Caryophyllaceae)
<b>Scientific name</b>	<b><i>Colobanthus brevisepalus</i></b>
<b>Common name</b>	<b>Pin cushion</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Cushion plant up to 8cm across, many short stiff tightly-packed branches closely covered with leaves. Leaves incurved towards stem, densely overlapping, rounded on back, 2-3mm long; long needle-like tips, no midrib evident. Flower stalks short. Flowers 3mm long, with 5 sepals, broader than leaves, with thickened midrib, ending in short needle-like tip.
<b>Habitat</b>	On dry mountains, especially on limestone and schist outcrops, rocks, sandy banks and slopes.
<b>Associated plants</b>	<i>Hebe pimeleoides</i> , <i>Gingidia decipiens</i> , <i>G. enysii</i> , <i>Pimelea sericeo-villosa</i> .
<b>Similar species</b>	<i>Colobanthus canaliculatus</i> , <i>C. buchananii</i> .
<b>Distinguishing features</b>	<i>C. brevisepalus</i> has overlapping, shorter leaves than <i>C. canaliculatus</i> with its spreading, longer leaves. <i>C. buchananii</i> has sepals longer than petals.
<b>Distribution</b>	South Island: east of main divide from Marlborough southwards.

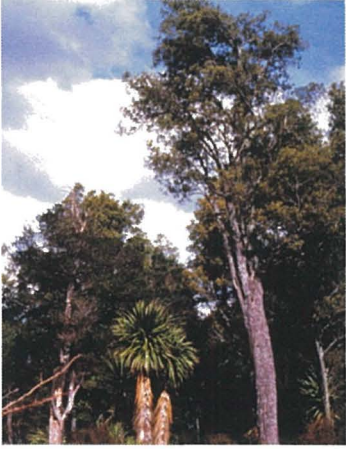


Photo: Brian Molloy



Drawing: Cathy Jones

<b>Family name</b>	<b>Coffee family (Rubiaceae)</b>
<b>Scientific name</b>	<b><i>Coprosma obconica</i> ssp. <i>obconica</i></b>
<b>Common name</b>	<b>Small-leaved coprosma</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Erect shrub, 2-4m tall, with interlaced hairy branchlets. Leaves oblong, 3-6mm long, glossy surface, pale undersurface with slightly turned down reddish margins, often with nipple shaped tips. Juvenile leaves distinctively multi-coloured and speckled. Flowers small, greenish-yellow, nondescript. Fruit fleshy, 4mm long, broader than long, but narrowing to point of attachment; yellowish-white with occasional purple-grey stripes.
<b>Habitat</b>	Forest, tall scrub and grassy areas on river terraces, shrublands, calcareous rocks and cliffs.
<b>Associated plants</b>	Other small-leaved <i>Coprosma</i> species.
<b>Similar species</b>	<i>Coprosma crassifolia</i> .
<b>Distinguishing features</b>	Juvenile leaves of <i>C. obconica</i> ssp. <i>obconica</i> have distinctive speckles. Pear-shaped fruit are unlike any other <i>Coprosma</i> species. <i>C. crassifolia</i> has thick, dark green leaves, pale underneath, with hairy margins.
<b>Distribution</b>	Central North Island, northern and eastern South Island.



Photos: Cathy Jones



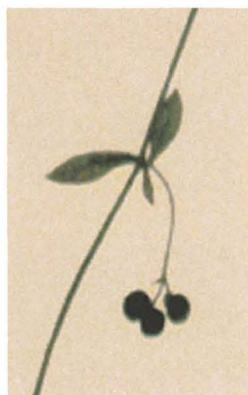
Photo: Shannel Courtney



Photo: Colin Ogle

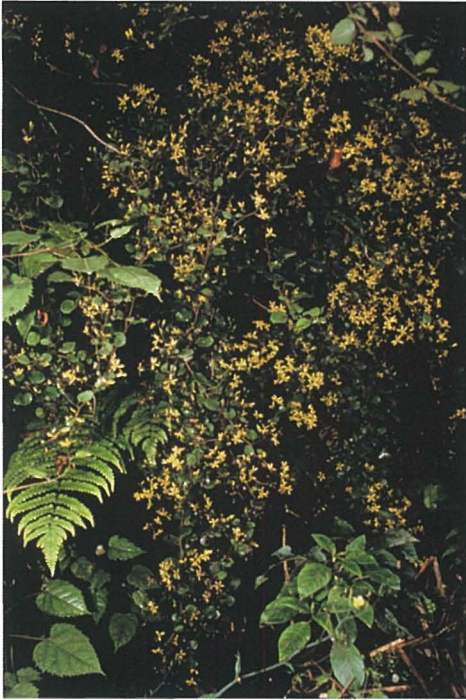
<b>Family name</b>	<b>Coffee family (Rubiaceae)</b>
<b>Scientific name</b>	<b><i>Galium trilobum</i></b>
<b>Common name</b>	<b>Native bedstraw</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Perennial herb with straggling, slender stems, 10-70cm long. Leaf stems 0.5-3mm long. Leaves 2-10mm long, 0.8-3mm wide, narrowly elliptic or spoon-shaped, in whorls of 4. Flower stalks up to 20mm long. Flowers white, starry, 2-3mm diameter; 3-4 clumped in leaf axils. Fruit small, round, dark brown.
<b>Habitat</b>	Lowland to upland. In shady, damp and wet places, such as forest margins, scrub, stream and lake sides, moist pastures and tussockland, shrubland, rushland in seepages and near swamps.
<b>Associated plants</b>	Manuka, red tussock, rushes, sedges, beech forest species, lacebark.
<b>Similar species</b>	<i>Galium propinquum</i> , <i>G. palustre</i> , <i>G. perpusillum</i> .
<b>Distinguishing features</b>	<i>G. trilobum</i> has narrower, longer leaves and larger flowers on longer flower stems than <i>G. propinquum</i> . The introduced <i>G. palustre</i> has 5-30 flowers per head. <i>G. perpusillum</i> has narrow leaves, shorter stems and single flowers.
<b>Distribution</b>	North and South Island.





Photos: Cathy Jones

<i>Family name</i>	<b>Daisy family</b> (Asteraceae)
<i>Scientific name</i>	<b><i>Brachyglottis sciadophila</i></b>
<i>Common name</i>	<b>Climbing groundsel</b>
<i>Threat category</i>	Gradual decline.
<i>Description</i>	Slender, twining or tangled climber, often draped over host plant in a dense mass or creeping along ground. Stems up to 5m long, woody, slender and flexible, hairy, grooved lengthwise. Leaves 2-3cm wide, round or oval, thin and coarsely toothed, soft hairs on both surfaces. Flowers solitary yellow daisies.
<i>Habitat</i>	Lowland, along forest margins or in alluvial forest.
<i>Associated plants</i>	Small broadleaved trees, shrubs.
<i>Similar species</i>	-
<i>Distinguishing features</i>	The only climbing yellow daisy.
<i>Distribution</i>	Central and southern North Island and South Island.



Photos: John Smith-Dodsworth

Photo: John Sawyer



<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Brachyscome</i> “Ward”</b>
<b>Common name</b>	<b>Ward daisy</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Small plant, relatively hairless. Leaves oblong to spoon-shaped, tapering at base, no teeth. Flower stem relatively long. Flowers about 1cm across, with white petals. Seeds fluffy.
<b>Habitat</b>	Coastal limestone outcrops, mostly on fine debris, and in crevices.
<b>Associated plants</b>	Silver tussock, <i>Lagenifera pumila</i> .
<b>Similar species</b>	<i>Lagenifera pumila</i> , <i>Bellis perennis</i> , <i>Brachyscome sinclairii</i> .
<b>Distinguishing features</b>	<i>Brachyscome</i> “Ward” is a smaller plant than the common lawn daisy ( <i>Bellis perennis</i> ). Flowers more chunky with fewer petals than native <i>Lagenifera pumila</i> . Leaves of <i>Brachyscome</i> “Ward” are smooth and oblong-shaped, without teeth. <i>Brachyscome sinclairii</i> has lobed leaves.
<b>Distribution</b>	Restricted to Ward limestone in South Marlborough.





Photos: Jan Clayton-Greene





<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Celmisia cordatifolia</i> var. <i>brockettii</i></b>
<b>Common name</b>	<b>Heart-leaved mountain daisy</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Tufted herb. Leaves heart-shaped, 4-6cm long, 2cm wide, lower surface covered with soft thick felted, white hair. Flowers white daisies, about 2.5cm diameter. Seeds fluffy.
<b>Habitat</b>	Open mountain range tops amongst rocks.
<b>Associated plants</b>	Snowberries, <i>Colobanthus</i> species, native grasses, <i>Pentachondra pumila</i> .
<b>Similar species</b>	<i>Celmisia cordatifolia</i> var. <i>similis</i> , <i>Celmisia cordatifolia</i> var. <i>cordatifolia</i> .
<b>Distinguishing features</b>	<i>C. cordatifolia</i> var. <i>brockettii</i> is smaller than the other two varieties, and covered underneath with very distinctive soft felted, white hair.
<b>Distribution</b>	Only known in Bounds Range, South Marlborough.

Photo: Ingrid Hutzler

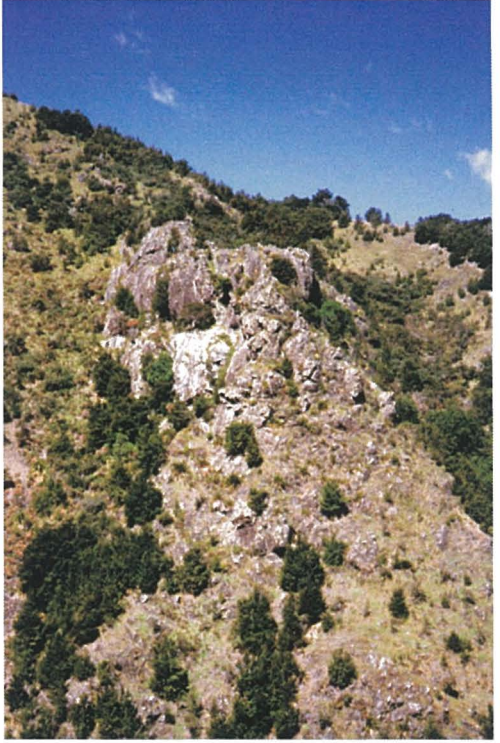


Photo: Shannel Courtney

<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Celmisia cordatifolia</i> var. <i>similis</i></b>
<b>Common name</b>	<b>Heart-leaved mountain daisy</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Tufted herb with heart shaped leaves, 6-8cm long, 2-4cm wide. Leaf stems up to 12cm long, leaf margins curved under, lower leaf surface covered in white to pale buff soft hair. Flowers white daisies, 4-5cm diameter. Seeds fluffy.
<b>Habitat</b>	Steep bluffs, rocky ridgelines.
<b>Associated plants</b>	Snowberries, <i>Pentachondra pumila</i> , native grasses.
<b>Similar species</b>	<i>Celmisia cordatifolia</i> var. <i>cordatifolia</i> , <i>C. cordatifolia</i> var. <i>brockettii</i> .
<b>Distinguishing features</b>	<i>C. cordatifolia</i> var. <i>similis</i> has pale hair colour and leaves usually thinner and more pointed than <i>C. cordatifolia</i> var. <i>cordatifolia</i> , which has thick rusty brown hair. It is larger than <i>C. cordatifolia</i> var. <i>brockettii</i> .
<b>Distribution</b>	Confined to the Richmond Range, South Marlborough.

U  
L  
L  
I  
P  
S  
I  
C  
A  
S  
P  
E  
C  
I  
E  
S

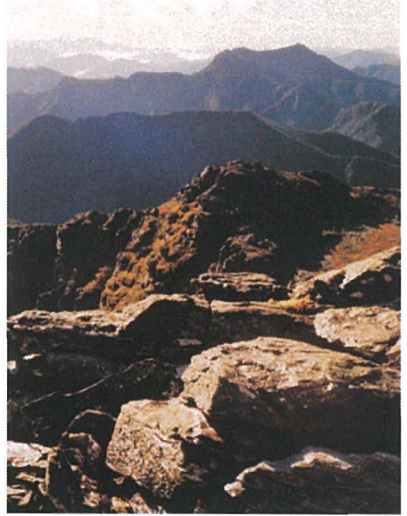


Photo: Martin Clapham

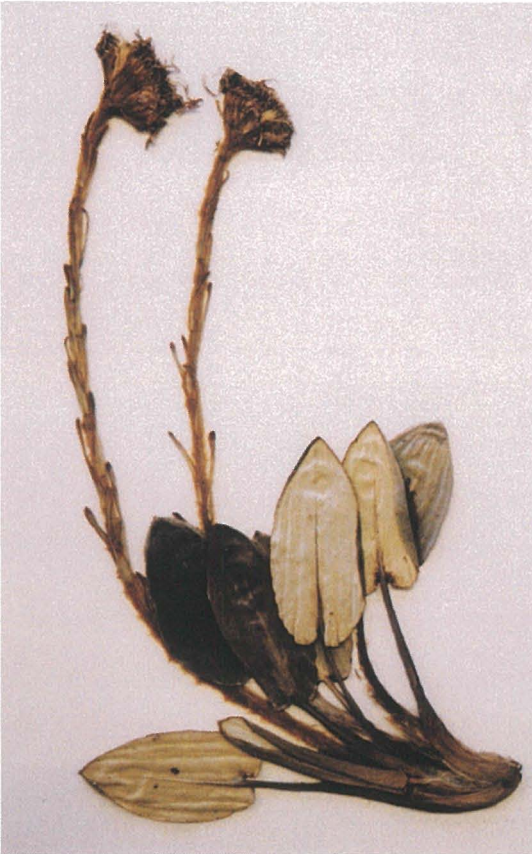
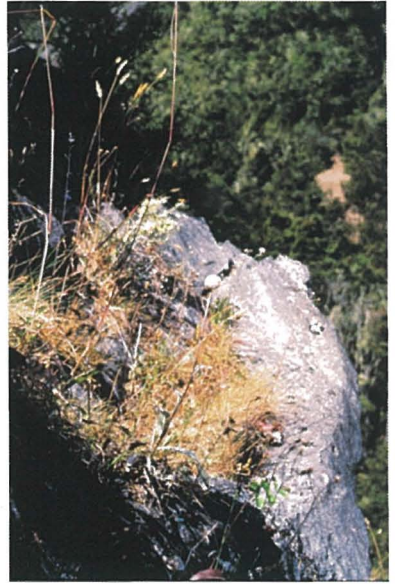


Photo: Simon Moore/Mike North

<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Craspedia</i> “Leatham”</b>
<b>Common name</b>	<b>Leatham woollyhead</b>
<b>Threat category</b>	Nationally critical.
<b>Description</b>	Small herb forming rosettes. Leaves silver-grey to pale green, linear to oblong, 2-10cm long, 0.5-1.5cm wide, both surfaces densely clad in short hairs. Flower stems 10-20cm tall. Flowers solitary lemon-yellow buttons without petals, about 1cm diameter.
<b>Habitat</b>	Cracks and ledges near top of limestone bluffs.
<b>Associated plants</b>	Kanuka, <i>Elymus solandri</i> , <i>Sophora longicarinata</i> , <i>Hieracium lepidulum</i> , weedy grasses.
<b>Similar species</b>	Other <i>Craspedia</i> species.
<b>Distinguishing features</b>	Lemon-yellow flowers, silvery leaves, dry limestone bluff habitat.
<b>Distribution</b>	Confined to Leatham Valley, South Marlborough.





Photos: Cathy Jones

<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Craspedia</i> “tarn”</b>
<b>Common name</b>	<b>Sedgemere woollyhead</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	A small tufted rosette herb. Leaves 2-5cm long, 0.5-1.5cm wide, hairless on both surfaces, green, pointed, often with reddish margin and nipple tip. Stem leaves smaller. Flowers white, in dense button-like flower heads without petals, 0.5-1cm diameter on a stalk up to 20cm tall. Seedheads fawn, spherical and fluffy.
<b>Habitat</b>	Upland, fertile ephemeral tarn.
<b>Associated plants</b>	<i>Viola cunninghamii</i> , <i>Carex gaudichaudiana</i> , <i>Plantago triandra</i> , <i>Oreomyrrhis colensoi</i> var. <i>delicatula</i> , <i>Leptinella pusilla</i> .
<b>Similar species</b>	Other <i>Craspedia</i> species, such as <i>C. uniflora</i> , <i>C. lanata</i> .
<b>Distinguishing features</b>	<i>Craspedia</i> “tarn” has leaves which are hairless, green on both sides, with red margins and nipple tips. <i>C. uniflora</i> and <i>C. lanata</i> are both hairy to varying degrees.
<b>Distribution</b>	Only known from one ephemeral tarn in the upper Wairau Valley, South Marlborough.



Photos: Cathy Jones

<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Lagenifera montana</i></b>
<b>Common name</b>	<b>Papataniwha</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Small herb with leaves in a rosette at base of plant. Leaves usually less than 8mm wide, elliptic, appearing hairless (tiny hairs visible with handlens), with margins shallowly toothed, sometimes not toothed. Flowers pinkish mauve or purple.
<b>Habitat</b>	Subalpine to alpine seeps, cushion bogs, swamps, lake and tarn margins, wet tussock grassland and stream banks, 600 to 900m altitude, occasionally lower.
<b>Associated plants</b>	Rushes, sedges, red tussock, willow herbs.
<b>Similar species</b>	<i>Lagenifera barkeri</i> , <i>L. cuneata</i> .
<b>Distinguishing features</b>	<i>L. montana</i> has pinkish or purple flowers and leaves appear hairless, while <i>L. barkeri</i> has obvious leaf hairs, white flowers, and slightly more pointed leaves. <i>L. cuneata</i> has white flowers and grows in drier habitats.
<b>Distribution</b>	North Island: South Auckland, Hawkes Bay and Wellington. South Island: Nelson, Marlborough, Canterbury and Southland.







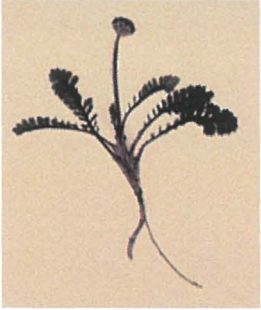
<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Leptinella filiformis</i> (formerly <i>Cotula</i>)</b>
<b>Common name</b>	<b>Slender button daisy</b>
<b>Threat category</b>	Nationally critical.
<b>Description</b>	A small, creeping and branching herb, often forming open patches. Leaves hairless, finely divided, almost fern-like, dull green, alternate, 0.3-2.0cm long, 0.2-0.4cm wide, rather distant (up to 1.5cm) along stems and branchlets. Flowers small, white, button-like, 2-5mm across; on fairly long stems, 3cm tall. Fruit in densely packed flower head, 2-5mm in diameter.
<b>Habitat</b>	Lowland to upland grassland, open shrubland on basins, plains and valley floors east of divide, 300-600m altitude.
<b>Associated plants</b>	Dry mosses, small native grasses.
<b>Similar species</b>	<i>Leptinella nana</i> , <i>Leptinella minor</i> .
<b>Distinguishing features</b>	<i>L. filiformis</i> has relatively large white flowers. <i>L. nana</i> is smaller in size with minute flowers, 1-2mm across. <i>L. minor</i> has larger leaves than <i>L. filiformis</i> and a different pattern of leaf lobes.
<b>Distribution</b>	North-eastern South Island.



Photos: Cathy Jones



<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Leptinella serrulata</i> (formerly <i>Cotula</i>)</b>
<b>Common name</b>	<b>Dryland button daisy</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Low creeping herb, forming turfy patches. Leaves blue-green, but often brown-stained, 0.7-2cm long, 0.2-0.6cm wide, conspicuously silver-haired, spirally arranged; leaflets overlapping, with broad, blunt teeth. Flower heads yellow-green, scented, button-like, 2mm across; on hairy, pale stems.
<b>Habitat</b>	Upland tussock grasslands of drier areas, on river flats and coastal, open sandy ground. From sea level to 1500m altitude.
<b>Associated plants</b>	<i>Raoulia</i> species, <i>Hieracium</i> species.
<b>Similar species</b>	<i>Leptinella pusilla</i> .
<b>Distinguishing features</b>	<i>L. serrulata</i> has brown pigments on mature, silver-hairy leaves, with overlapping leaflets, broader and blunter teeth. <i>L. pusilla</i> is almost hairless with spaced leaflets and pointed teeth.
<b>Distribution</b>	South Island: east of the main divide from Marlborough to Foveaux Strait. Abundant in Mackenzie Country and Central Otago.



Photos: Cathy Jones



Photo: Tony Silbery

<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Olearia hectorii</i></b>
<b>Common name</b>	<b>Deciduous tree daisy, Hector's tree daisy</b>
<b>Threat category</b>	Nationally vulnerable.
<b>Description</b>	Deciduous shrub or small tree up to 9.5m tall with long sinuous branchlets. May be multileadered or single stemmed. Bark thick, grey, cork-like, with deep longitudinal furrows on older trunks and branches. Branchlets ribbed and bronzed-red. Leaves opposite, oval-shaped, 2-5cm long, 0.5-2cm wide, smooth and moss-green above, covered in fine silvery hair below, with slender leaf stems up to 18mm long. Flowers small, daisy-like, cream, going brown with age, 3-5mm diameter, in bunches of 2-6, on slender stalks up to 15mm.
<b>Habitat</b>	Where hill country meets alluvial sites affected by flooding and siltation, debris avalanching, water-logging, drought and/or frost. Part of successional vegetation on fertile soil, e.g. cut-off meanders, river margins, frosty depressions, and light gaps in forest understoreys.
<b>Associated plants</b>	Narrow leaved lacebark, mountain ribbonwood and kowhai. In South Marlborough it grows mainly with kanuka, manuka and <i>Coprosma propinqua</i> .
<b>Similar species</b>	<i>Olearia odorata</i> , <i>O. fragrantissima</i> .
<b>Distinguishing features</b>	<i>O. hectorii</i> has opposite leaves and straight twig stems. <i>O. fragrantissima</i> has alternate leaves and zigzag twig stems. <i>O. odorata</i> has narrower, smaller leaves lacking leaf stalks, and is a much smaller tree.
<b>Distribution</b>	Eastern South Island.





Photo: David Oberdries

Photo: Shannel Courtney



<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Pachystegia minor</i></b> (formerly <i>Pachystegia insignis</i> var. <i>minor</i> )
<b>Common name</b>	<b>Marlborough daisy</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Small and slender spreading shrub, less than 1m tall. Leaves diamond-shaped or blunt-ended, 6.5-10cm long, 2.5-4cm wide, with a thin layer of felted hair on the back. Flower heads white, max. 3.5cm diameter. Flower stalks slender, sometimes leafy, about 10cm long.
<b>Habitat</b>	Coastal and inland lowland, usually confined to steep rocky or stony sites, rock faces and slopes.
<b>Associated plants</b>	<i>Helioebe hulkeana</i> ssp. <i>bulkeana</i> .
<b>Similar species</b>	<i>Pachystegia insignis</i> .
<b>Distinguishing features</b>	Leaves of <i>P. minor</i> are much smaller and more slender, with thinner layer of felted hair. It has smaller, slender stalked flowers, opening slightly later than other <i>Pachystegia</i> species.
<b>Distribution</b>	From Clarence to Puhipuhi Rivers, South Marlborough.



Photos: John Smith-Dodsworth



Photo: Brian Molloy

<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Pseudognaphalium</i> “Zoo”</b>
<b>Common name</b>	<b>Zoo cudweed</b>
<b>Threat category</b>	Extinct
<b>Description</b>	Small, grey, woolly-leaved herb. Leaves 1-2cm long, up to 1cm wide, oval to oblong with triangular shaped tip. Flowers small, very pale lemon; bracts around flowers almost unpigmented.
<b>Habitat</b>	Grassland adjacent to lowland, fertile swamp.
<b>Associated plants</b>	Grasses.
<b>Similar species</b>	<i>Pseudognaphalium luteoalbum</i> , <i>P.</i> “coast” and <i>P.</i> “mountain”.
<b>Distinguishing features</b>	<i>Pseudognaphalium</i> “Zoo” has oblong leaves with a narrow, diamond shaped tip. <i>P.</i> “coast” has mostly linear spoon-shaped leaves with a sharply pointed tip. <i>P.</i> “mountain” has mostly oblong spoon-shaped to narrowly oblong leaves with a rounded tip.
<b>Distribution</b>	Only found at one place adjacent to the Zoo wetland, South Marlborough.



Photos: Cathy Jones





<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Raoulia</i> aff. <i>bookeri</i> “coast”</b>
<b>Common name</b>	<b>Coastal cushion daisy</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Compact white cushions up to 70cm across. Leaves tiny, boat shaped, rounded, 2-3mm long, 1-2mm wide. Flower heads small, yellow without obvious petals. Seeds windborne, fluffy.
<b>Habitat</b>	On lowland coastal river banks, flood plains, beach gravel and sand.
<b>Associated plants</b>	Tauhinu, matagouri, knobby club rush, pohuehue ( <i>Muehlenbeckia complexa</i> ).
<b>Similar species</b>	<i>Raoulia bookeri</i> , other <i>Raoulia</i> species.
<b>Distinguishing features</b>	<i>R. aff bookeri</i> “coast” has leaves larger than <i>R. bookeri</i> and grows in coastal habitats.
<b>Distribution</b>	North and South Island.

Photo: Shannel Courtney

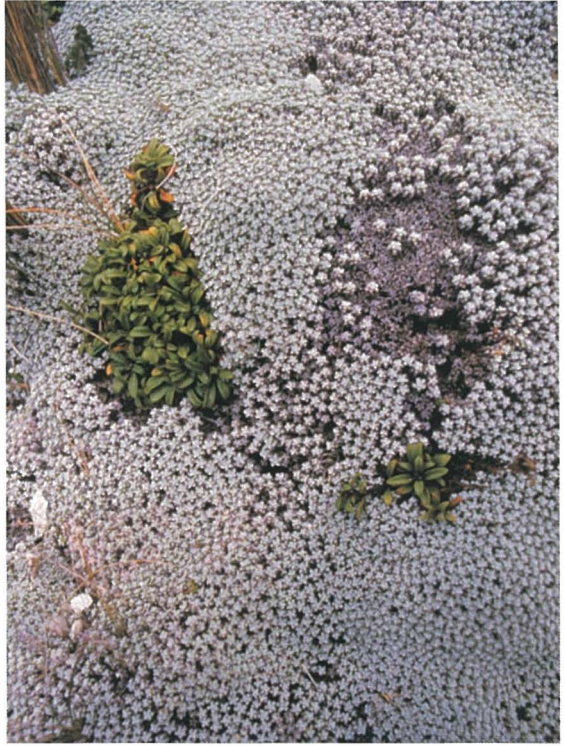


Photo: Cathy Jones

Photo: Cathy Jones



<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Raoulia monroi</i></b>
<b>Common name</b>	<b>Fan-leaved mat daisy</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Small daisy, forming loose, grey mats. Stems prostrate, creeping and rooting, with ascending branchlets. Leaves 2-3mm long, linear-oblong, coated in white hair; growing in one plane, in two rows along the stem. Flower heads small, up to 5mm diameter.
<b>Habitat</b>	Lowland to upland open ground and rocky places, on river terraces and stabilised river gravel.
<b>Associated plants</b>	<i>Galium perpusillum</i> , <i>Epilobium rostratum</i> , <i>Scleranthus uniflorus</i> .
<b>Similar species</b>	Other <i>Raoulia</i> species.
<b>Distinguishing features</b>	Leaves of <i>R. monroi</i> are arranged in one plane, in two rows along the stem.
<b>Distribution</b>	South Island: Nelson, Marlborough, Canterbury and Otago.



Photo: John Barkla



Photos: Cathy Jones



<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Raoulia parkii</i></b>
<b>Common name</b>	<b>Celadon mat daisy</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Small daisy with creeping stems, forming tight to open mats. Branchlets erect. Leaves broad, 3-5mm long, 2 mm wide, angled at midrib, spreading to recurved at tips and closely overlapping. Flower heads small, 4-7mm across. Plant covered with layer of pale-yellow to yellow-green hair (except near base), giving overall pale green appearance.
<b>Habitat</b>	Upland to subalpine open places, rocky ground, in grassland and fellfield.
<b>Associated plants</b>	Snow tussock, short tussock, cushion vegetation, <i>Raoulia subsericea</i> , <i>Dracophyllum uniflorum</i> .
<b>Similar species</b>	<i>Raoulia subsericea</i> , <i>R. hookeri</i> .
<b>Distinguishing features</b>	<i>R. parkii</i> has distinctive pale green colour and leaves which are broader, firmer and more closely overlapping than <i>R. subsericea</i> . <i>R. subsericea</i> is brighter green, <i>R. hookeri</i> is grey.
<b>Distribution</b>	South Island: east of the main divide.



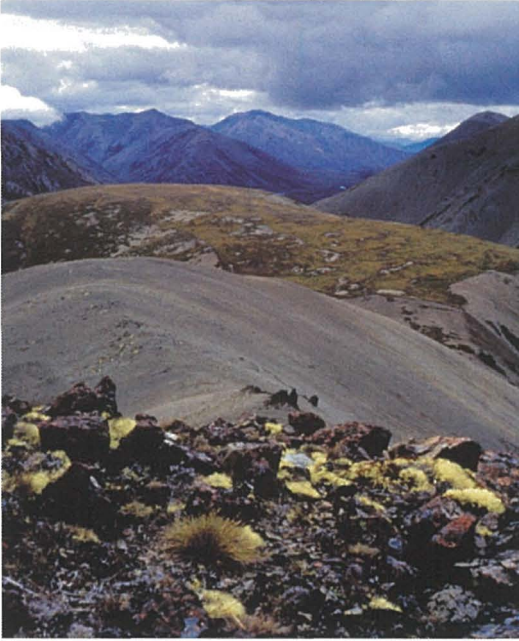
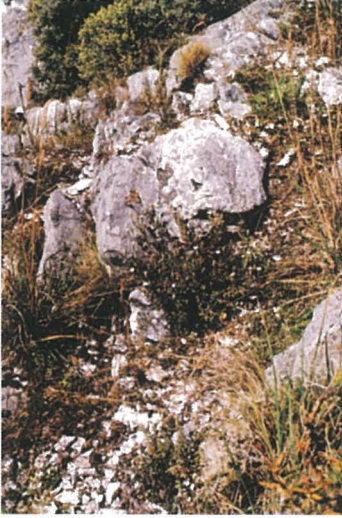


Photo: Cathy Jones

Photo: John Smith-Dodsworth



<b>Family name</b>	<b>Daisy family (Asteraceae)</b>
<b>Scientific name</b>	<b><i>Vittadinia australis</i></b>
<b>Common name</b>	<b>White fuzzweed</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Fine, spreading, prostrate to ascending, perennial herb, up to 30cm tall with stout root. Stems usually sparsely to densely clothed in long, white, erect hairs and glandular hairs, becoming hairless and woody toward base. Leaves dull green, hairy, often 3- to 5-lobed, up to 1.5cm long. Flower heads small daisies, 1-1.5cm across, with white petals and yellow centres, occurring singly at branch tips. Seed heads spherical and fluffy.
<b>Habitat</b>	In stony and eroding tussock grassland, dry hill slopes, rock outcrops (including limestone, greywacke), riverbeds and other stony places. Lowland through low-alpine zone to 1,500m.
<b>Associated plants</b>	Tussocks, sun hebes, Marlborough daisies.
<b>Similar species</b>	Introduced weedy <i>Vittadinia gracilis</i> and <i>V. cuneata</i> .
<b>Distinguishing features</b>	<i>V. australis</i> has spreading white stem hairs and white flowers. The introduced species have purple flowers and tightly pressed stem hairs.
<b>Distribution</b>	North and South Island.



Photos: Jan Clayton-Greene



<b>Family name</b>	<b>Dock family (Polygonaceae)</b>
<b>Scientific name</b>	<b><i>Muehlenbeckia astonii</i></b>
<b>Common name</b>	<b>Shrubby tororaro, shrub pohuehue, wiggywig, mingimingi</b>
<b>Threat category</b>	Nationally vulnerable.
<b>Description</b>	A rounded, bushy, twiggy, deciduous shrub up to 3m tall. Zigzag branches interlace, forming a compact, springy plant. Branchlets reddish-brown, more or less interlacing but not twining. Bark on older branches dark grey/brown. Leaves small, thin and broadly heart-shaped; in small clusters or alternately along longer branchlets. Flowers tiny, 3-5mm diameter, greenish to white or pinkish white, in small clusters. Nut small, black, 3-angled, with dull faces, surrounded by flower remnants which may be swollen and succulent.
<b>Habitat</b>	Dry shrub communities of coastal and lowland sites, on moderate to high fertility soils.
<b>Associated plants</b>	<i>Olearia solandri</i> , pohuehue ( <i>Muehlenbeckia complexa</i> ), tauhinu, matagouri, native broom.
<b>Similar species</b>	<i>Muehlenbeckia complexa</i> , prostrate kowhai.
<b>Distinguishing features</b>	<i>Muehlenbeckia astonii</i> is an upright shrub with reddish-brown to red-orange zigzag interlacing branchlets. <i>M. complexa</i> is a scrambler with twining, not zigzag, orange-brown stems and no distinct trunk. Prostrate kowhai has tiny oval leaflets and large yellow flowers.
<b>Distribution</b>	From southern North Island to Marlborough and Canterbury.





Photos:  
Cathy Jones



<b>Family name</b>	<b>Fathen family (Chenopodiaceae)</b>
<b>Scientific name</b>	<b><i>Chenopodium detestans</i></b>
<b>Common name</b>	<b>Fish-guts plant</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Very smelly prostrate herb, probably annual. Often reddish on exposed parts, with at least the young parts and flower stalk covered in a grey mealy substance. Stems branched and prostrate, or with just the tips ascending, stiff, slender and pale, up to 30cm long. Leaves hairless, 4-10mm long, 4-10mm wide, more or less diamond shaped, sometimes with one pair of teeth. Flowers in dense clusters in axils of leaves, with the largest clusters near branch tips. Seeds circular, flattened and shiny, with blunt margins.
<b>Habitat</b>	Lowland to upland, in bare habitats, on gravel and stony lake shores, and in tussock grassland.
<b>Associated plants</b>	Grasses, weedy herbs.
<b>Similar species</b>	<i>Chenopodium vulvaria</i> , <i>C. pusillum</i> .
<b>Distinguishing features</b>	<i>C. detestans</i> has a strong smell of rotten fish. <i>C. vulvaria</i> also smells of rotten fish, but is more spreading, with longer stems, larger leaves and seed with sharp margins. <i>C. pusillum</i> does not smell of fish and has much smaller hairy leaves.
<b>Distribution</b>	South Island: east of the main divide from Nelson and Marlborough to Otago.

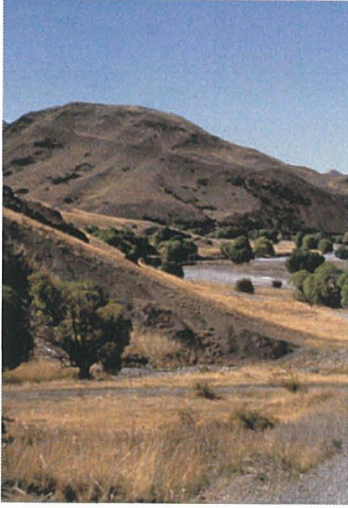


Photo: Cathy Jones



Photo: Shannel Courtney

<b>Family name</b>	<b>Fathen family</b> (Chenopodiaceae)
<b>Scientific name</b>	<b><i>Chenopodium pusillum</i></b>
<b>Common name</b>	<b>Small fathen</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Branching, finely hairy, greyish-green herb up to 15cm diameter. Often forms small, flat cushions. Stems slender, prostrate at base and ascending at tips. Leaves hairy on both surfaces, 3-5mm long, 2-5mm wide, broad-oblong to oval. Flowers very small, in grainy clusters at axil of leaf.
<b>Habitat</b>	Open, sandy and stony places, usually in cultivated or modified ground, coastal to lower upland regions.
<b>Associated plants</b>	Grasses, weedy herbs.
<b>Similar species</b>	<i>Chenopodium pumilio</i> , <i>C. detestans</i> .
<b>Distinguishing features</b>	<i>C. pusillum</i> has small leaves. <i>C. pumilio</i> has larger leaves with lobed margins. <i>C. detestans</i> smells of rotten fish, has larger flower clumps and hairless diamond-shaped leaves.
<b>Distribution</b>	Shores of eastern North Island, Lake Taupo and eastern South Island.

Photo: Cathy Jones

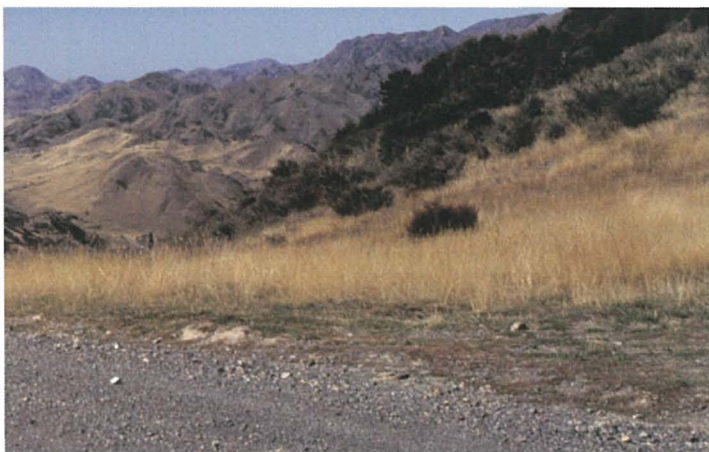


Photo: Shannel Courtney





<b>Family name</b>	<b>Forget-me-not family</b> (Boraginaceae)
<b>Scientific name</b>	<b><i>Myosotis australis</i> var. <i>lytteltonensis</i></b> (also known as <i>Myosotis</i> 'lytteltonensis')
<b>Common name</b>	<b>Lyttelton forget-me-not</b>
<b>Threat category</b>	Nationally critical.
<b>Description</b>	Prostrate herb with single rosette when young, then with straggling stems. Leaf stalk narrow, similar length to blade. Leaves spoon-shaped or elliptic, 2-6cm long, 4-12mm wide, tip rounded; upper surface with spreading, fine, crowded hairs, under-surface hairs sparser and shorter. Upper stem leaves without stalk, mostly 1-1.5cm long, tip slightly pointed. Flowers white or yellow, around 4mm long, with long style and very short flower stalks.
<b>Habitat</b>	Generally coastal, on cliff faces, but also found inland. Usually in damp and shaded places.
<b>Associated plants</b>	<i>Brachyglottis lagopus</i> , <i>Asplenium appendiculatum</i> , <i>Linum monogynum</i> , silver tussock, <i>Oxalis exilis</i> .
<b>Similar species</b>	<i>Myosotis australis</i> "small white", <i>M. forsteri</i> .
<b>Distinguishing features</b>	<i>M. australis</i> var. <i>lytteltonensis</i> has flowers with a long style, extending beyond petals. <i>M. australis</i> "small white" has flowers with a short style, remaining within the petal tube. <i>M. forsteri</i> has orange gland dots on back of leaves.
<b>Distribution</b>	Lyttelton and possibly in South Marlborough.

Photo: Nick Head



Photo: Alastair Robertson

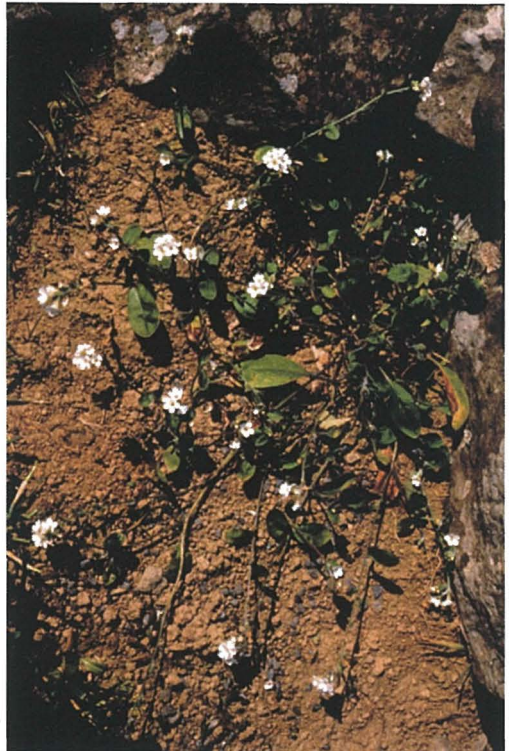


Photo: Shannel Courtney

<b>Family name</b>	<b>Forget-me-not family (Boraginaceae)</b>
<b>Scientific name</b>	<b><i>Myosotis colensoi</i></b>
<b>Common name</b>	<b>Castle Hill forget-me-not</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Low herb with rosettes of numerous leaves, forming small cushions or loose mats. Leaves up to 4cm long, narrow at base, widening in the top third, then narrowing to a point; upper surface with stiff hairs of variable length, pressed closely against the leaf, lower surface hairs more equal in length and less numerous or absent. Leaf stalks short. Flowers white, up to 12mm diameter, with protruding stamens; solitary or grouped in small clusters among the leaves. Nuts shiny, black, oblong, about 1.2mm long.
<b>Habitat</b>	Limestone talus and thin soils over limestone rock. Most common in open areas of relatively fine limestone debris.
<b>Associated plants</b>	<i>Carmichaellia astonii</i> , <i>Gentiana astonii</i> .
<b>Similar species</b>	Other <i>Myosotis</i> species.
<b>Distinguishing features</b>	<i>M. colensoi</i> forms loose cushions or mats. It has larger flowers than most other native forget-me-nots and short flower stems.
<b>Distribution</b>	Eastern South Island: South Marlborough to Canterbury.



Photos: Cathy Jones





**Family name** Forget-me-not family (Boraginaceae)

**Scientific name** *Myosotis laingii*

**Common name** Waiautoa forget-me-not

**Threat category** Data deficient.

**Description** A creeping forget-me-not which forms loose rosettes. Leaves strap-like, 8-15cm long, 1-2cm wide, with short, fine hairs. Flowering stems erect, 15-40cm tall with few leaves. Flower heads of approximately 12 large-petalled yellow flowers, each up to 10mm diameter.

**Habitat** River terraces, 800-1400m altitude.

**Associated plants** Tussock grasses.

**Similar species** *Myosotis laeta*, *M. traversii*, *M. australis* "yellow".

**Distinguishing features** *M. laingii* has large yellow flowers with anther tips protruding above petals and few leaves on flower stem. *M. laeta* and *M. traversii* have white flowers. *M. australis* "yellow" has smaller flowers with leafy stalks and anthers which do not stick out above petals.

**Distribution** South Marlborough.



Photo: Cathy Jones



Photo: Shannel Courtney

**Family name** Forget-me-not family (Boraginaceae)  
**Scientific name** *Myosotis pygmaea* var. *minutiflora*  
**Common name** Tiny flowered forget-me-not

**Threat category** Nationally vulnerable.

**Description** Prostrate rosette herb with short lateral branches. Leaves with unequal sides, in two opposite rows, overlapping, narrow-oblong, 5-7mm long, 1-2mm wide, without leaf stalks; upper surface hairy except towards base, lower surface almost hairless. Leaf hairs stiff and slightly spreading. Flowers white to cream, less than 1mm diameter, hairy.

**Habitat** Coastal to alpine, in open and more or less shingly places.

**Associated plants** *Oreomyrrhis rigida*, *Coprosma atropurpurea*.

**Similar species** *M. pygmaea* var. *pygmaea*.

**Distinguishing features** *M. pygmaea* var. *minutiflora* has smaller flowers than *M. pygmaea* var. *pygmaea*.

**Distribution** North Island: Wellington west coast. South Island: South Marlborough, Canterbury, Central Otago.



Photo: Shannel Courtney

Photo: Julia Brooke-White



Photos: Colin Ogle





<b>Family name</b>	<b>Forget-me-not family</b> (Boraginaceae)
<b>Scientific name</b>	<b><i>Myosotis pygmaea</i> var. <i>pygmaea</i></b>
<b>Common name</b>	<b>Pygmy forget-me-not</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	Ground hugging rosette herb in 1cm to several cm diameter clumps. Lateral branches few to many, prostrate, up to 9cm long. Leaves oval to spoon-shaped; upper surface hairy except towards base, lower surface almost hairless. Leaf hairs stiff and spreading. Flowers white to cream, 3mm diameter.
<b>Habitat</b>	Open coastal habitats to upland grassland, herbfield, open rocky, sandy places and stream sides. Sea level to 1200m altitude.
<b>Associated plants</b>	<i>Selliera radicans</i> , <i>Zoysia minima</i> , <i>Pimelea urvilleana</i> , <i>Leptinella dioica</i> .
<b>Similar species</b>	<i>Myosotis pygmaea</i> var. <i>minutiflora</i> .
<b>Distinguishing features</b>	<i>M. pygmaea</i> var. <i>pygmaea</i> has larger flowers than <i>M. pygmaea</i> var. <i>minutiflora</i> .
<b>Distribution</b>	North Island: East coast from Hawkes Bay south. South Island; Nelson and east of main divide.

Photo: Alastair Robertson

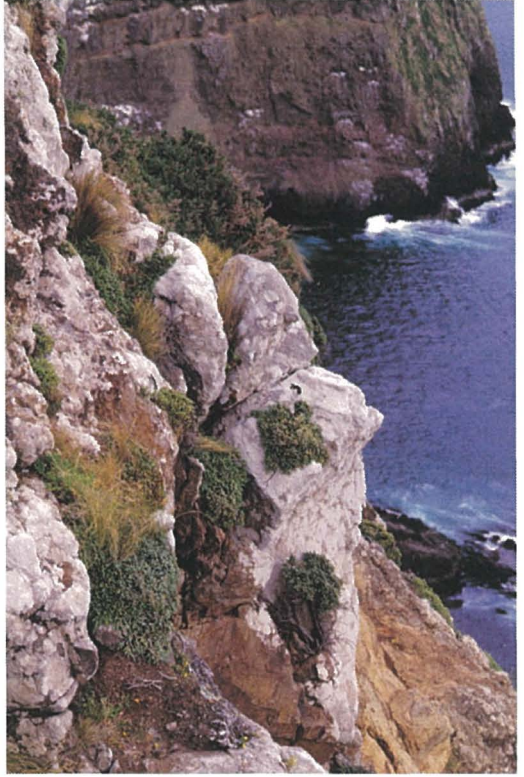


Photo: Shannel Courtney



**Family name** Forget-me-not family (Boraginaceae)

**Scientific name** *Myosotis* "Tapuae-o-Uenuku"

**Common name** Tapuae-o-Uenuku forget-me-not

**Threat category** Nationally critical.

**Description** Small forget-me-not forming cushions about 5cm across. Leaves spoon-shaped, up to 1cm long, bluntly pointed, upper surface and margins with long, spreading hairs, lower surface with few hairs or hairless. Flowers, white, solitary, 4-5mm diameter.

**Habitat** High altitude alpine seeps, moist gravels.

**Associated plants** *Myosotis pygmaea* var. *minutiflora*, *Cbionobebe pulvinaris*, *Poa novae-zelandiae*.

**Similar species** *Myosotis "drucei"*, *M. pygmaea* var. *minutiflora*.

**Distinguishing features** *M.* "Tapuae-o-Uenuku" forms cushions, has solitary flowers and pointed leaves with obvious long white hairs. *M. "drucei"* does not form cushions, has larger leaves and flowers, with several flowers per stem. *M. pygmaea* var. *minutiflora* has smaller flowers, and leaves that are less pointed, with hairs that are less obvious.

**Distribution** Inland Kaikoura Range, South Marlborough.



Photos: Jan Clayton-Greene





<b>Family name</b>	<b>Foxglove family (Scrophulariaceae)</b>
<b>Scientific name</b>	<b><i>Hebe cupressoides</i></b>
<b>Common name</b>	<b>Cypress hebe</b>
<b>Threat category</b>	Nationally vulnerable.
<b>Description</b>	A cypress-like, densely-branched whipcord shrub, up to 1.5m tall and 1.5m wide. Branchlets fine, erect, blue-green to grey-green, short and spreading, about 1mm diameter. Scale leaves widely spaced in pairs along the stem, narrowly triangular, pointed, closely pressed to the stem, about 1-1.5mm long, with 2-4mm of stem visible between leaf pairs. Juvenile leaves up to 6mm long, lobed, spreading. Flowers white to pale or strong lilac; in small clusters at branchlet tips, 3-4 times width of branchlet. Capsule brown, not extending far beyond outer leaves of flower head.
<b>Habitat</b>	Upland to lower alpine shrubland and scrub. Commonly occurs on sites associated with regular disturbance (e.g. alluvial terraces, talus slopes, boulder fields and slump features). 600-1,000m altitude.
<b>Associated plants</b>	Other shrubs of the grey scrub community, especially matagouri and <i>Coprosma propinqua</i> .
<b>Similar species</b>	<i>Hebe propinqua</i> .
<b>Distinguishing features</b>	<i>H. cupressoides</i> has fine branches, blue-green branchlets and wide spaces between scale leaves. <i>H. propinqua</i> has green branchlets, white flowers and a shorter gap between the pairs of scale leaves.
<b>Distribution</b>	South Island: east of the main divide from Marlborough to Otago.

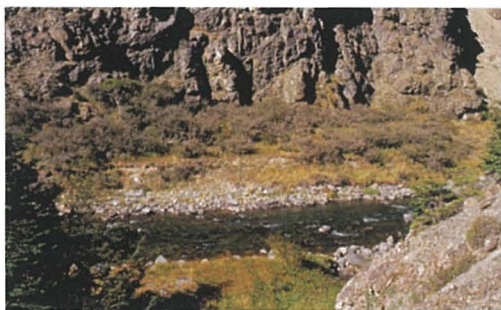


Photo: Neill Simpson

Photo: Cathy Jones



Photo: David Norton

**Family name** Foxglove family (Scrophulariaceae)  
**Scientific name** *Hebe salicornioides*  
**Common name** Whipcord hebe

**Threat category** Nationally endangered.

**Description** Erect shrub up to 1m tall. Branches numerous, erect; young branchlets round in cross-section, 2-5cm long, softly fleshy and flexible when fresh. Leaves up to 1mm long, scale-like and pressed very closely to stem, not glossy, green to yellowish-green, tip bluntly rounded, margins with pale rim, incurved. Flower head with white flowers, 2-2.5mm long, arising straight from stalk, up to 12 flowers per stem. Seed capsule 4.5-5mm long, 2-2.5mm wide, rounded diamond shape.

**Habitat** Mountain valleys, usually in very wet ground, 750-1500m.

**Associated plants** *Dracophyllum uniflorum*, bog pine, red tussock.

**Similar species** *Hebe armstrongii*, *Hebe ochracea*.

**Distinguishing features** *Hebe salicornioides* is erect and has few branches. Leaves do not overlap or stick out from stem as in other whipcord hebes. Leaves of *H. armstrongii* form bumps along the stem. *H. ochracea* has a dense spreading habit, firm glossy branchlets and thick, olive-green leaves.

**Distribution** South Island: Wairau Mountains, West Marlborough to North Canterbury, West Otago.

Photo: Cathy Jones



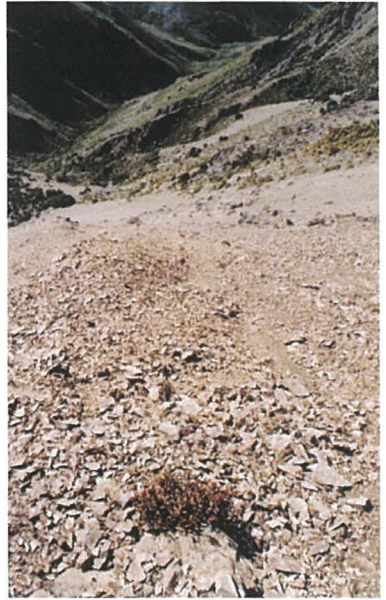
Photos: John Smith-Dodsworth





<b>Family name</b>	<b>Foxglove family (Scrophulariaceae)</b>
<b>Scientific name</b>	<b><i>Heliohebe acuta</i></b>
<b>Common name</b>	<b>Waiautoa sun hebe</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	Small shrub, 50-200mm tall. Branchlets upright, red-brown to grey, with thick corky bark. Leaves narrow, leathery and shiny, rigid, 5-15mm long, 2-6mm wide, sides of leaves usually folded upwards to give a boat-shaped appearance; upper surface green to bronze-green and shiny, undersurface very pale, dull, with numerous pores. Leaf margins red with shallow, rounded or sharp teeth. Flower head 1-2cm long, at end of branch, consisting of 30-70 flowers, 5-8mm diameter, bright pink at first, mauve after pollination; throat pink, pale yellow anthers. Seed capsule, dark brown, swollen and smooth, 2.0-2.5mm long, 1.0-1.5mm wide. Capsules splitting open to one third when ripe.
<b>Habitat</b>	Largely confined to bare eroding ribs of black, excessively shattered greywacke (argillite).
<b>Associated plants</b>	<i>Helichrysum coralloides</i> , <i>Oxalis</i> "scree", <i>Hebe cheesemanii</i> .
<b>Similar species</b>	<i>Heliohebe raoulii</i> , <i>H. pentasepala</i> .
<b>Distinguishing features</b>	<i>H. acuta</i> has boat-shaped leaves with toothed and reddish margins and no wings on leaf stalks. <i>H. raoulii</i> has smaller, pink-mauve to white flowers and broad unfolded leaves. <i>H. pentasepala</i> has pink to pale pink flowers and longer, only weakly folded leaves. The latter two species both have narrowly winged leaf stalks.
<b>Distribution</b>	South Island: Seaward and Inland Kaikoura Ranges only.

Photo: Robert Lamberts



Photos: Shannel Courtney



<b>Family name</b>	<b>Foxglove family (Scrophulariaceae)</b>
<b>Scientific name</b>	<b><i>Mazus novaezeelandiae</i> ssp. <i>impolitus</i> f. <i>impolitus</i></b>
<b>Common name</b>	<b>Matt leaved mazus</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	Small herb, forming prostrate rosettes or tufts. Leaves 2-8cm long, oval to oblong, dull mid-green, hairless, thin and pliable, with shallowly wavy margins and often a brown marginal band; mid-rib raised and often reddish. Flowers white, 6-12mm long, with yellow or purplish throat; 1-6 together on an erect stalk. Seed capsules large, 3-3.5mm long, compressed and spherical, each containing numerous minute seeds.
<b>Habitat</b>	Swamp and stream margins, soggy ground, river flats beneath tawa and kahikatea, behind beaches and on rocky coastal headlands, amongst sandy turf and coastal pasture species, and under coastal kanuka on wetland margins.
<b>Associated plants</b>	Kanuka, tawa, kahikatea, coastal turf herbs and turf-forming exotic pasture species, <i>Dichondra repens</i> , <i>Hydrocotyle</i> species, <i>Coprosma crassifolia</i> .
<b>Similar species</b>	<i>Mazus radicans</i> .
<b>Distinguishing features</b>	<i>M. novaezeelandiae</i> ssp. <i>impolitus</i> f. <i>impolitus</i> has white flowers and hairless leaves with a brown marginal band. <i>M. radicans</i> has hairy leaves, usually with brown splotches around margins and short-stemmed flowers with upper lip mid to deep purple or violet and lower lip white to yellow.
<b>Distribution</b>	North and South Island, Marlborough, Canterbury and Otago.



Photo: Cathy Jones

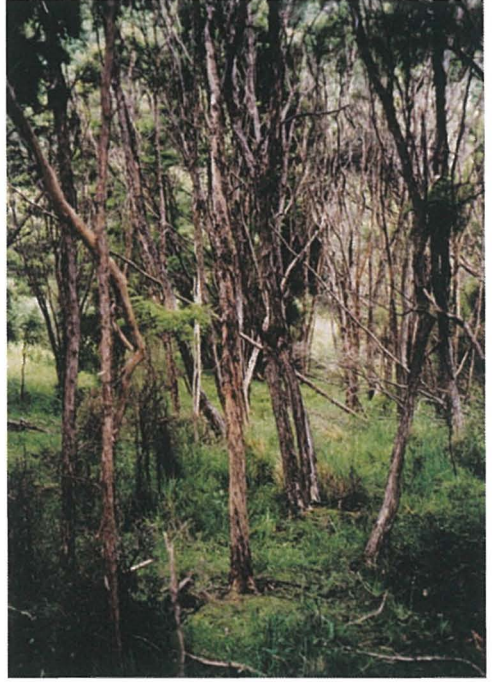


Photo: Andrew Townsend





<b>Family name</b>	<b>Fuchsia family (Onagraceae)</b>
<b>Scientific name</b>	<b><i>Epilobium chionanthum</i></b>
<b>Common name</b>	<b>Marsh willowherb</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Loosely clumped herb; initially prostrate, then many erect leafy stems, up to 75cm tall. Stems often reddish, with hairs in lines or absent. Leaves dull green, hairless, elliptic or narrow, 1.2-4cm long, 0.7-1.5cm wide, with tiny teeth; mostly in opposite pairs, widely spaced up the stem. Flowers large, white, often flushed pink, 6-11mm long, 4.5-6mm wide. Flower stalk and long, thin capsule finely hairy. Seeds 1.4 -1.7mm long, with tufts of persistent hairs.
<b>Habitat</b>	In swamps and wet swards of grasses or sedges, beside lakes or rivers, and in bogs. Lowland to upland, mostly below 900m altitude.
<b>Associated plants</b>	Sedges, grasses.
<b>Similar species</b>	Other <i>Epilobium</i> species.
<b>Distinguishing features</b>	<i>E. chionanthum</i> has large flowers and hairless, dull green leaves with tiny teeth.
<b>Distribution</b>	Scattered throughout North and South Island.



Photos: Cathy Jones



Photos: Colin Ogle



<b>Family name</b>	<b>Fuchsia family (Onagraceae)</b>
<b>Scientific name</b>	<b><i>Epilobium hirtigerum</i></b>
<b>Common name</b>	<b>Hairy willowherb</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Robust, erect herb, 20-140cm tall, with numerous leafy stems from base, usually no branches. Plant densely covered everywhere with long spreading hairs, often greyish, with a layer of shorter erect hairs. Leaves blue-green, very narrow to lance-shaped, coarsely toothed, 1.5-6cm long, 0.2-0.8cm wide, mostly alternate. Flowers, 2.8-8mm long, 1.8-5.2mm wide, white or rose-purple. Capsule densely hairy, 3.5-6cm long.
<b>Habitat</b>	In swamps, marshes, wet places, riverbeds, lake edges. Sea level to 800m altitude.
<b>Associated plants</b>	Unknown.
<b>Similar species</b>	<i>Epilobium pallidiflorum</i> , <i>E. cinereum</i> .
<b>Distinguishing features</b>	<i>E. hirtigerum</i> is unbranched and has long as well as short hairs. <i>E. pallidiflorum</i> has leaves without hairs. <i>E. cinereum</i> is usually branched, has leaves with short, but not spreading hairs and fewer teeth.
<b>Distribution</b>	Throughout North Island except Taranaki. Scattered in South Island, mainly east of the main divide.



Photos: Cathy Jones





<b>Family name</b>	<b>Fuchsia family (Onagraceae)</b>
<b>Scientific name</b>	<b><i>Epilobium pictum</i></b>
<b>Common name</b>	<b>Grassland willowherb</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Slender, soft herb. Stems numerous, hairy, erect or sprawling, 7-30cm tall. Leaves narrow, opposite, pale to bright green, mottled grey-green above, often reddish below, 8-22mm long, 2.5-6mm wide, sharply toothed. Flowers white, 2.8-4.5mm long, 1.5-3.4mm wide. Capsule 2-2.5cm long, very pale, downy.
<b>Habitat</b>	Lowland to upland grassland and open places, forest margins, often in rocky places, up to 900m altitude.
<b>Associated plants</b>	Tussock species and other grasses.
<b>Similar species</b>	Other <i>Epilobium</i> species.
<b>Distinguishing features</b>	The grey-green mottled leaves of <i>E. pictum</i> are unique in this family.
<b>Distribution</b>	Scattered throughout South Island, mostly east of the main divide.



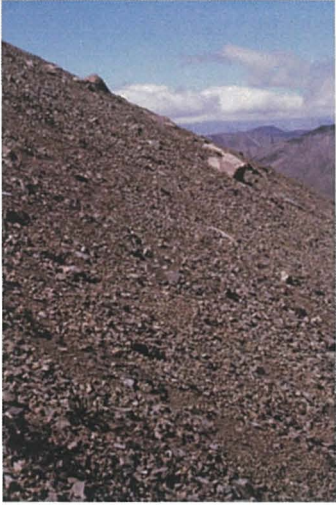
Photo: Peter Johnson



Photos:  
Cathy Jones



<b>Family name</b>	<b>Gentian family</b> (Gentianaceae)
<b>Scientific name</b>	<b><i>Gentianella bellidifolia</i> var. <i>magnifica</i></b> <b>“Barefell”</b>
<b>Common name</b>	<b>Scree gentian</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	A stout-rooted biennial or perennial herb. Flowering plant 17-19cm tall. Leaves long, strap-like, crimson, or green with crimson margins; forming a basal rosette, which shrivels by the time the plant flowers. Flower head robust and many branched; flower stems 36-40 per plant. Flowers several per flower stem, white, with blue/black anthers, yellow pollen, 2cm tall.
<b>Habitat</b>	Alpine scree.
<b>Associated plants</b>	Scree plants such as <i>Haastia sinclairii</i> , <i>Oxalis</i> “scree”, <i>Poa buchananii</i> , <i>Hebe epacridea</i> , <i>Rachelia glaria</i> .
<b>Similar species</b>	<i>Gentiana corymbifera</i> .
<b>Distinguishing features</b>	Scree gentian has large numbers of flowers and flower stems. <i>G. corymbifera</i> is taller, has a single flowering stem and is confined to tussockland habitats, rather than scree.
<b>Distribution</b>	South Marlborough.



Photos: Cathy Jones

Photo: John Lovis





<b>Family name</b>	<b>Grass family (Poaceae)</b>
<b>Scientific name</b>	<b><i>Austalopyrum calcis ssp. calcis</i></b>
<b>Common name</b>	<b>Limestone wheatgrass</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	A primitive tufted perennial grass, with simple unbranched head. Sheath hairless. Leaf 10-30cm long, 1-2mm wide, flat, green to blue-green. Flowering stem to 60cm tall. Developing spikelets more or less parallel to stem, but at right angles during flowering. Awns (hair tips) short. In January/February spikelets turn stiff and straw-coloured.
<b>Habitat</b>	High fertility soil at base of limestone outcrops. In partial shade under treeland.
<b>Associated plants</b>	Putaputaweta, other grasses, porcupine shrub, giant nettle, <i>Coprosma propinqua</i> .
<b>Similar species</b>	Grasses, especially other native wheatgrasses.
<b>Distinguishing features</b>	Spikelets at right angles.
<b>Distribution</b>	Confined to one limestone outcrop in Leatham Valley, inland Marlborough.



Photos: Shannel Courtney

<b>Family name</b>	<b>Grass family (Poaceae)</b>
<b>Scientific name</b>	<b><i>Austrofestuca littoralis</i></b>
<b>Common name</b>	<b>Sand tussock</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Dense, pale yellow tussocks, up to 1m tall. Leaf base pale, grooved. Ligule short. Leaf 50-100cm, rolled, erect, rigid, sharp pointed and smooth. Flower stem smooth, 50-100cm. Flower head dense, erect, cord-like, without elongated tips.
<b>Habitat</b>	Coastal dunes, especially foredunes and dune hollows.
<b>Associated plants</b>	Pingao, spinifex, shore bindweed, marram grass.
<b>Similar species</b>	<i>Austrostipa stipoides</i> , marram grass, silver tussock.
<b>Distinguishing features</b>	Sand tussock has moderately large seeds in compact seed heads, which do not extend beyond the height of the leaves. Leaves rolled, completely smooth to the touch and stiff. It is shorter than other similar species. <i>Austrostipa stipoides</i> is a dull leaved tussock with long seed tips, growing in estuaries. Marram grass is greener, less tussock-forming and has flowers raised above the leaves. Silver tussock has folded or inrolled leaves, a minutely rough flower stem and branched, less compact seed heads.
<b>Distribution</b>	Coastal North and South Island, Stewart and Chatham Islands and Australia.



Photo: Shannel Courtney



Photo: John Barren



<b>Family name</b>	<b>Grass family (Poaceae)</b>
<b>Scientific name</b>	<b><i>Deschampsia cespitosa</i></b>
<b>Common name</b>	<b>Tufted hair-grass</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Stiffly erect green tussock up to 1m or more tall, becoming yellow as it matures. Leaves rather stiff, narrow, flat or semi-rolled, more than 2mm wide when flattened. Flower head 80-140mm long, open in flower, then tending to contract again. Spikelets small, shiny yellow-green or tinged with purple.
<b>Habitat</b>	Coastal to subalpine damp grass or sedge swards near lakes, rivers and swamps.
<b>Associated plants</b>	Buttercups.
<b>Similar species</b>	Silver tussock.
<b>Distinguishing features</b>	<i>Deschampsia cespitosa</i> is taller than silver tussock. It has green flattened leaves with a tall pointed ligule at the junction of leaf blade and leaf sheath. Silver tussock has rolled leaves, short blunt ligules and occurs on drier sites.
<b>Distribution</b>	North, South and Stewart Island and in most other temperate parts of the world.



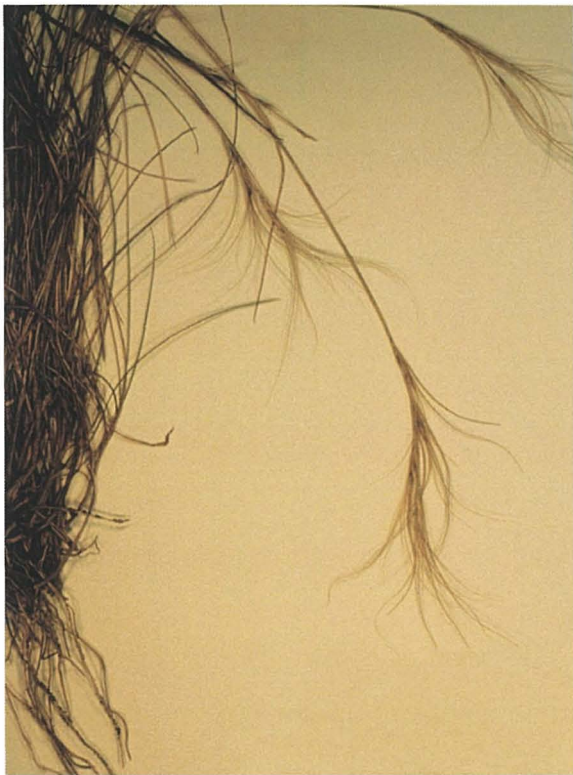
Photo: John Barkla



Photos: Cathy Jones



<b>Family name</b>	<b>Grass family (Poaceae)</b>
<b>Scientific name</b>	<b><i>Elymus aff. solandri</i> “Channel”</b>
<b>Common name</b>	<b>Channelled bluegrass</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Grass growing in open, grey-green tufts of narrow leaves, softly hairy or smooth. Leaves up to 20cm long, 2-4mm wide, with channelled midrib. Stem leaves at right angles to stem. Flower stems becoming up to 20cm long and arched. Flower heads of 5 spikelets, each with up to 6 florets. Awns (hair tips) on seed head 1-3cm long, becoming twisted as the head turns fawn and brittle.
<b>Habitat</b>	Clay banks, dry gravel pasture, unstable sandstone or mudstone.
<b>Associated plants</b>	<i>Rytidosperma (Danthonia)</i> species.
<b>Similar species</b>	<i>Elymus solandri</i> , <i>E. tenuis</i> , <i>E. rectisetus</i> .
<b>Distinguishing features</b>	Channelled bluegrass has awns 1-3cm long and channelled leaves. <i>E. solandri</i> has longer awns, 4-6cm long, and flat leaves. <i>E. tenuis</i> has bronzed leaves, long, trailing flower stems and short awns only 3mm long. <i>E. rectisetus</i> (naturalised from Australia) has longer flower stems and straight awns 3-5cm long.
<b>Distribution</b>	Known only from South Marlborough.



Photos: Cathy Jones





<b>Family name</b>	<b>Grass family (Poaceae)</b>
<b>Scientific name</b>	<b><i>Elymus tenuis</i></b>
<b>Common name</b>	<b>Prostrate bluegrass</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Prostrate, open grass. Leaves flat, bronzed, 10-15cm long, 2mm wide, hairless, with prickly-toothed margins. Flower stem up to 2m long, slender, trailing along ground. Flower heads 10-15cm, of up to 15 spikelets, each with 6-8 florets. Awns (hair tips) up to 3mm.
<b>Habitat</b>	Open fescue-tussock grassland. From sea level to 900m altitude.
<b>Associated plants</b>	Fescues, silver tussock, <i>Rytidosperma (Danthonia)</i> species.
<b>Similar species</b>	Other <i>Elymus</i> species.
<b>Distinguishing features</b>	Prostrate bluegrass has long flowering stems, bronze colouring and short awns. <i>E. solandri</i> has flat, blue-green leaves and awns 4-6cm long. <i>E. aff. solandri</i> "Channel" has channelled leaves and awns 1-3cm long. <i>E. rectisetus</i> has straight awns, 3-5cm long.
<b>Distribution</b>	North and South Island, including north-west Nelson, Marlborough and east of main divide to Southland.



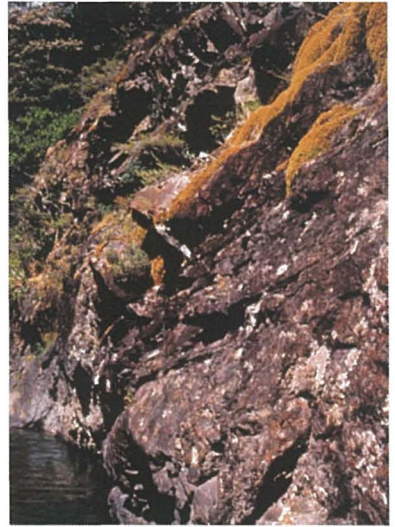
Photos: Cathy Jones

<b>Family name</b>	<b>Grass family (Poaceae)</b>
<b>Scientific name</b>	<b><i>Stenostachys laevis</i></b>
<b>Common name</b>	<b>Grassland wheatgrass</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Grass with long, slender stems. Leaves few, green, flat and thin, 15-25cm long, 1.5-2mm wide; occasionally with hairs. Flower stems 50-75cm. Flower head very narrow, up to 12cm long, pale green, drooping or nodding, composed of 10-25 smooth spikelets, each with 1-2 florets.
<b>Habitat</b>	Grasslands, often in damp sites. Sea level to 1,300m altitude.
<b>Associated plants</b>	Other grasses.
<b>Similar species</b>	<i>Stenostachys gracilis</i> .
<b>Distinguishing features</b>	<i>S. laevis</i> has flower stems 50-75cm long and grows in grassy, often damp sites. <i>S. gracilis</i> has much longer flower stems (70-100cm) and grows in drier sites, often under forests and in shrublands, only occasionally in grassland.
<b>Distribution</b>	North Island: North-west Ruahine Range. Throughout South Island except Nelson, Buller and Westland.





<b>Family name</b>	<b>Heath family (Ericaceae)</b>
<b>Scientific name</b>	<b><i>Dracophyllum uniflorum</i> var. <i>frondosum</i></b>
<b>Common name</b>	<b>Sprawling inaka, sprawling turpentine shrub</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Much-branched prostrate to sprawling shrub with stout main branches up to 1m or more long. Branchlets densely covered with overlapping, rigid leaves, ending in a stiff, sharp point. Leaves 20-30mm long, 1-1.5mm wide. Flowers 7-10mm long, 3-4mm wide, solitary, white, at end of branchlets.
<b>Habitat</b>	Upland rocky cliffs.
<b>Associated plants</b>	Mosses, lichens, kanuka, beech species, <i>Celmisia monroi</i> , <i>Helichrysum intermedium</i> .
<b>Similar species</b>	<i>Dracophyllum uniflorum</i> .
<b>Distinguishing features</b>	Sprawling inaka is a sprawling plant, while <i>D. uniflorum</i> is a small, upright shrub.
<b>Distribution</b>	South Marlborough, central and eastern Otago.



Photos: Cathy Jones



<b>Family name</b>	<b>Ivy family</b> (Araliaceae)
<b>Scientific name</b>	<b><i>Raukaua edgerleyi</i></b> (formerly <i>Pseudopanax edgerleyi</i> )
<b>Common name</b>	<b>Raukawa</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Tree up to 10m or more tall. Leaves dark green, very glossy above, paler below, hairless, aromatic, often with wavy margins; juvenile leaves with 3-5 leaflets and attractively lobed; adult leaves unlobed and smooth-edged, 7-15cm long, 3-5cm wide. Leaf stalks 1.5-5cm long. Flowers small, greenish, in small clusters. Fruit in clumps 3-4mm across, spherical, with 3-4 seeds per fruit.
<b>Habitat</b>	Coastal and lowland to lower hill country forest. From sea level to 900m. May be epiphytic on other trees.
<b>Associated plants</b>	Mahoe, tree ferns, large-leaved <i>Coprosma</i> species.
<b>Similar species</b>	Juvenile <i>Raukaua simplex</i> .
<b>Distinguishing features</b>	Leaves of <i>R. edgerleyi</i> are wide, aromatic and glossy. <i>R. simplex</i> leaves are smaller.
<b>Distribution</b>	North and South Island.



Photos: Guyon Warren



<b>Family name</b>	<b>Leafy mistletoe family (Loranthaceae)</b>
<b>Scientific name</b>	<b><i>Alepis flavida</i></b>
<b>Common name</b>	<b>Yellow-flowered mistletoe, piritā, pīriraki, golden mistletoe</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	An open, much branched, semi-parasitic shrub, up to 1m across. Woody runners with disc-like attachment structures penetrate host plant at regular intervals. Leaves narrow, thick, oblong, often with black, deciduous tips; dull surfaces with distinct veins underneath; margins red and rough to touch. Flowers small, yellow, turning orange with age, in clusters of 10-15. Fruit small, oval, 4-5mm long, shiny and translucent, usually yellow, sometimes red.
<b>Habitat</b>	Lowland and upland beech forest, usually growing on black or mountain beech towards outer branches and branchlets, rather than on trunk.
<b>Associated plants</b>	Black beech, mountain beech.
<b>Similar species</b>	<i>Peraxilla colensoi</i> , <i>Peraxilla tetrapetala</i> .
<b>Distinguishing features</b>	<i>Alepis flavida</i> has disc-like attachment structures and oblong leaves with red margins. The plant grows in the outer branches of its host. <i>Peraxilla colensoi</i> and <i>P. tetrapetala</i> are more leafy, have red flowers, round or diamond shaped leaves with no red margin. They have different attachment structures and usually grow on the trunk of the host tree.
<b>Distribution</b>	North and South Island, but common only in Fiordland.

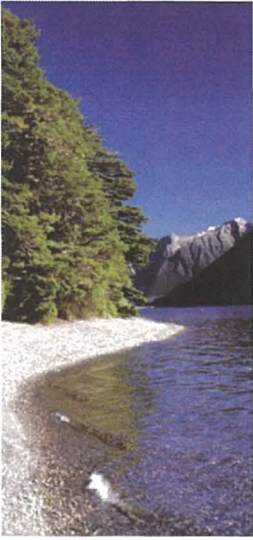


Photo: Cathy Jones



Photos: David Norton



Photo: Peter Johnson



<b>Family name</b>	<b>Leafy mistletoe family (Loranthaceae)</b>
<b>Scientific name</b>	<b><i>Peraxilla colensoi</i></b>
<b>Common name</b>	<b>Scarlet mistletoe, piritā, korukoru (when in flower)</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Large, bushy, long-lived, semi-parasitic shrub up to 3m across. Branchlets rounded, smooth and brittle. Leaves in opposite pairs, thick and leathery without visible veins, broad-oval, 30-50mm long, with smooth sub-glossy surface and sometimes slightly rough margins; upper and lower surfaces of leaf identical. Flowers spectacular, scarlet, in groups of 3-10, at first narrowly tubular, then splitting open to base. Berries small, oval, yellow. Seed very sticky.
<b>Habitat</b>	Lowland and upland beech forest, almost entirely confined to silver beech, although occasionally seen on red and black beech. Older plants usually on host trunk or large branches rather than on branchlets. Plants now often confined to solitary beech trees in paddocks in lowlands.
<b>Associated plants</b>	Silver beech.
<b>Similar species</b>	<i>Peraxilla tetrapetala</i> , <i>Ileostylus micranthus</i> .
<b>Distinguishing features</b>	<i>Peraxilla colensoi</i> is a larger plant with larger leaves than <i>P. tetrapetala</i> , has flowers in clumps of 3-10 and grows on silver beech. <i>P. tetrapetala</i> has leaves with blister galls, flowers in clumps of 1-3 and grows on black or mountain beech. <i>Ileostylus micranthus</i> does not grow on beech trees and has small, greenish flowers.
<b>Distribution</b>	North and South Island, but common only in southern parts of South Island.



Photos:  
Brian Molloy



Photo: John Smith-Dodsworth





<b>Family name</b>	<b>Leafy mistletoe family (Loranthaceae)</b>
<b>Scientific name</b>	<b><i>Peraxilla tetrapetala</i></b>
<b>Common name</b>	<b>Red mistletoe, pikirangi, pিরirangi, pikiraki, piritā</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	A semi-parasitic shrub up to 1-2m in height and width, connected to host by brittle runners with irregular attachment structures. Leaves 1-5cm long, in opposite pairs, mostly oblong or diamond shaped, thick and leathery, sub-glossy, often with prominent "blisters"; upper and lower surfaces identical in appearance. Branchlets compressed and hairy. Flowers tubular, bright red, splitting open to base; clumps of 1-3 in leaf axils. Berry 4-5mm, urn-shaped, fleshy, dull green even when ripe. Seed very sticky.
<b>Habitat</b>	Mountain beech forest in upland areas.
<b>Associated plants</b>	Mostly on trunks and branches of black or mountain beech and other beeches, sometimes on <i>Quintinia serrata</i> , rarely on other species.
<b>Similar species</b>	<i>Peraxilla colensoi</i> , <i>Ileostylus micranthus</i> .
<b>Distinguishing features</b>	<i>Peraxilla tetrapetala</i> has leaves mostly oblong or diamond shaped, with blister galls, 1-3 flowers per flower cluster and dull green fruit. It grows on black or mountain beech. <i>P. colensoi</i> is generally larger, has 3-10 flowers per flower cluster, wider leaves, no blisters and bright yellow fruit and usually grows on silver beech. <i>Ileostylus micranthus</i> has green flowers and does not parasitise beech.
<b>Distribution</b>	North and South Island, but less common in North Island.



Photos: Cathy Jones



<b>Family name</b>	<b>Leafy mistletoe family (Loranthaceae)</b>
<b>Scientific name</b>	<b><i>Tupeia antarctica</i></b>
<b>Common name</b>	<b>White mistletoe, taapia, pirita, tupia</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Semi-parasitic shrub, about 1m across. Leaves opposite, 3-5cm long, 1-3cm wide, fleshy, variable shapes from round-oblong to narrow-diamond-shaped, tapering to blunt point. Bark pale. Flowers greenish-yellow, 3-5mm diameter, on short stems. Fruit 5-7mm diameter, yellow-green when immature, white when ripe, sometimes finely spotted with pink or purple. Seed very sticky.
<b>Habitat</b>	Often in regenerating vegetation, where it parasitises a large number of often short-lived, native and exotic host trees.
<b>Associated plants</b>	Five finger, putaputaweta, <i>Coprosma</i> and <i>Pittosporum</i> species, green mistletoe ( <i>Ileostylus micranthus</i> ).
<b>Similar species</b>	Green mistletoe.
<b>Distinguishing features</b>	White mistletoe has male and female flowers on separate plants, unlike the other leafy mistletoes. Shoots are connected by green fibrous tissue, which runs under bark of host tree, without external runners. Plants may be browsed right back to host bark, but lumpy distortions of host trunk remain visible. Green mistletoe has external runners, which run outside trunk of host tree.
<b>Distribution</b>	North and South Island, common only in parts of eastern South Island.



Photo: Chris Ecroyd



Photos: Cathy Jones





**Family name** Mint family (Lamiaceae)  
**Scientific name** *Scutellaria novae-zelandiae*  
**Common name** New Zealand skullcap, shovel mint

**Threat category** Nationally vulnerable.

**Description** Herb or sub-shrub, up to 30cm tall, softly woody with stems creeping and rooting at base. Branches upright, dark and angular, covered in very fine soft hairs or almost hairless. Leaves small, 3-10mm long, 2-10mm wide, oval to round, up to 5-lobed, dotted with small glands and often light purplish below; in pairs, widely spaced along stem. Flowers white, solitary, in upper axils, softly hairy, up to 5mm across. Fruit opens to leave shovel-like scale after seeds disperse.

**Habitat** Free draining, alluvial matai, black beech, and totara forest.

**Associated plants** Matai, black beech, tanekaha, totara and *Coprosma* species.

**Similar species** -

**Distinguishing features** Shovel-shaped seed pods.

**Distribution** Northern South Island, particularly in west.



Photo: Cathy Jones



Photo: Barbara Mitcalfe



Photo: Bill Malcolm



Photos:  
Shannel Courtney



Photo: Colin Ogle

<b>Family name</b>	<b>Nettle family</b> (Urticaceae)
<b>Scientific name</b>	<b><i>Urtica linearifolia</i></b>
<b>Common name</b>	<b>Swamp nettle</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Sparingly branched herb which inflicts painful sting. Stems up to 2m tall. Leaves opposite, narrow, 3-8cm long, 5-12mm wide, sharply toothed with teeth 1-2mm long. Branchlets, leaf stalks and leaves sparsely clad in stinging hairs. Flowers inconspicuous, green to reddish, mealy, clustered in short spikes in leaf axils. Fruit small, 1-1.5mm long, dry, brown and one-seeded.
<b>Habitat</b>	Fertile, lowland swamps, lake and river margins, swampy shrubland and forest, often growing over tree stumps and rushes.
<b>Associated plants</b>	Sedges and rushes.
<b>Similar species</b>	Other nettle species.
<b>Distinguishing features</b>	Swamp nettle has narrower, longer leaves than other nettle species and grows in wetland habitat. The plant is not woody.
<b>Distribution</b>	North and South Island.

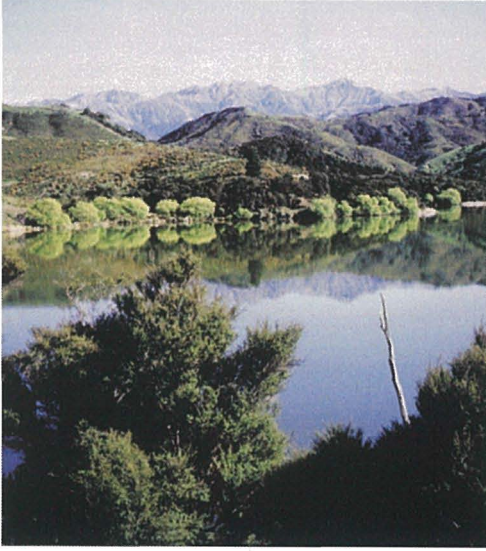


Photo: Cathy Jones



Photo: Simon Moore



Photo:  
Shannel Courtney



<b>Family name</b>	<b>Pea family</b> (Fabaceae)
<b>Scientific name</b>	<b><i>Carmichaelia carmichaeliae</i></b> (formerly <i>Notospartium carmichaeliae</i> )
<b>Common name</b>	<b>Pink broom</b>
<b>Threat category</b>	Nationally vulnerable.
<b>Description</b>	Small, almost leafless tree, up to 4m tall with very slender drooping branches. Leaves only seen on young plant. Flowers 8mm long, in slender clusters up to 5cm long; pink to deep pink with darker veins. Seed pods 8-17.5mm long, 2.5mm wide, flat, long slender beak at tip; 10 seeds per pod.
<b>Habitat</b>	Valley sides and river terraces, steep cliffs.
<b>Associated plants</b>	Kanuka, Marlborough daisy.
<b>Similar species</b>	<i>Carmichaelia glabrescens</i> .
<b>Distinguishing features</b>	<i>C. carmichaeliae</i> seeds are arranged in one row in pod. Pods are weakly constricted between seeds, with seed outline often visible through dry fruit wall. <i>C. glabrescens</i> pods are not constricted between seeds, seeds are in two rows and seed outline is not visible through fruit wall. <i>C. glabrescens</i> grows south of the Awatere fault.
<b>Distribution</b>	South Marlborough, north of the Awatere fault.



Photos: Cathy Jones



<b>Family name</b>	<b>Pea family</b> (Fabaceae)
<b>Scientific name</b>	<b><i>Carmichaelia crassicaule</i></b> (formerly <i>Corallospartium crassicaule</i> )
<b>Common name</b>	<b>Coral broom</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Rigid shrub up to 2m tall. Branches stout, erect, yellowish-green, deeply grooved with numerous parallel hair-lined grooves. Branchlets similar but somewhat flattened, up to 1 cm or more diameter, new growth densely covered in white hairs. Juvenile leaves almost round, adult leaves oblong. Plants nearly leafless when mature. Flowers creamy coloured, 6mm long, up to 20 in a tight cluster. Flower stalks and sepals covered in thick, soft, white hair. Seed pods 6-7mm long, rounded, usually one-seeded.
<b>Habitat</b>	Upland and subalpine grassland, scrub and rock.
<b>Associated plants</b>	Tussock species, <i>Dracophyllum</i> species.
<b>Similar species</b>	Other <i>Carmichaelia</i> species.
<b>Distinguishing features</b>	<i>C. crassicaule</i> has stout, erect, grooved branches, compressed one-seeded pods and tight bundles of flowers with woolly sepals.
<b>Distribution</b>	South Island: east of the main divide.



Photo: John Smith-Dodsworth

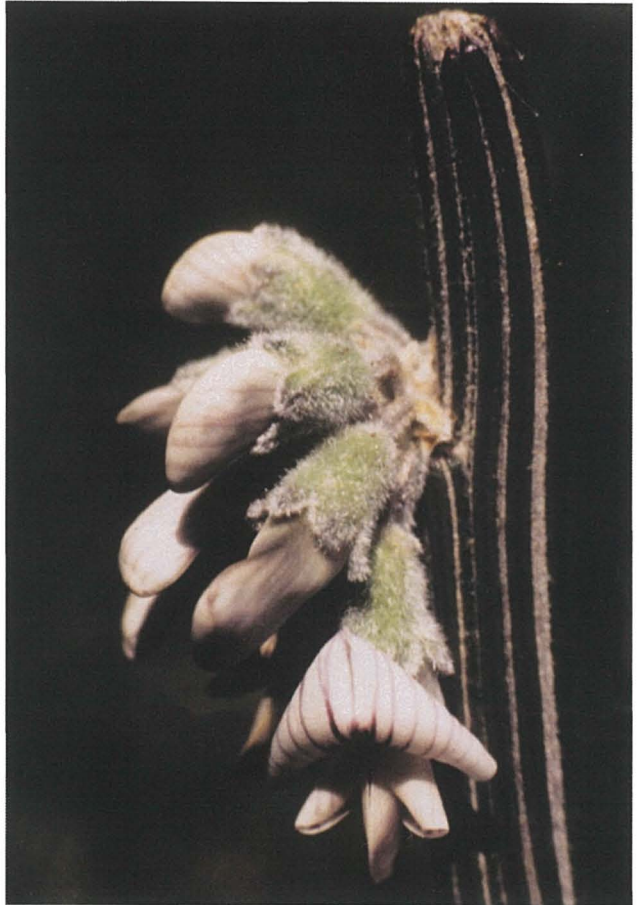


Photo: Shannel Courtney



<b>Family name</b>	<b>Pea family</b> (Fabaceae)
<b>Scientific name</b>	<b><i>Carmichaelia juncea</i></b>
<b>Common name</b>	<b>Tangle broom</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Sprawling, leafless broom, forming a flat, spreading mat up to 1.5m diameter. Branchlets slender and flattened. Leaflets on young plants only. Flowers purple and white in clusters of 4-6 along stems. Flowering can be very prolific. Pods oblong and dark grey-black. Seeds kidney-shaped, 1-6 per pod, often with black mottling.
<b>Habitat</b>	Occurs on stable but unconsolidated river bed gravels and stony, sandy and grassy edges of lakes, where competition from other plants is limited, or in coastal shrubland and turfland on weathered conglomerate rock.
<b>Associated plants</b>	Native grasses.
<b>Similar species</b>	<i>Carmichaelia compacta</i> , <i>C. curta</i> .
<b>Distinguishing features</b>	Prostrate growth habit and slender, wiry branchlets.
<b>Distribution</b>	Formerly in North and South Island. Now only known in South Westland and north-west Nelson.



Photos: Shannel Courtney



<b>Family name</b>	<b>Pea family (Fabaceae)</b>
<b>Scientific name</b>	<b><i>Carmichaelia kirkii</i></b>
<b>Common name</b>	<b>Climbing broom, Kirk's broom</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Climbing or scrambling broom, 1-3m tall. Branches flexible, 2-4m long and branchlets grooved, sparsely hairy or hairless. Supported by other plants or growing as a dense tangled mound. Leafy in spring and summer in moist shaded situations, but often leafless in drier localities exposed to sun and wind. Flowers cream and purple, in small bunches. Pods short, broad, dark brown, grey-brown or yellow-brown, with a prominent stout, pointed beak; seed pods persist until next flowering season. Seeds consistently and uniformly mottled off-white and black or dark purple.
<b>Habitat</b>	Grey scrub communities, on riverbanks, and at the bottom of terrace risers. Sometimes in wetland. Often under totara.
<b>Associated plants</b>	Hall's totara, matagouri, mountain toatoa, <i>Aristotelia fruticosa</i> , tauhinu, <i>Olearia odorata</i> , mountain ribbonwood.
<b>Similar species</b>	<i>Carmichaelia australis</i> , leafless clematis ( <i>Clematis afoliata</i> ).
<b>Distinguishing features</b>	Climbing broom has mottled seeds and prominently beaked pods, which persist throughout the year. <i>Carmichaelia australis</i> is a shrub rather than a climber. <i>Clematis afoliata</i> is always leafless.
<b>Distribution</b>	Eastern South Island.



Photos: Jan Clayton-Greene



Photo: Colin Ogle





<b>Family name</b>	<b>Pea family</b> (Fabaceae)
<b>Scientific name</b>	<b><i>Carmichaelia muritai</i></b> (formerly <i>Chordospartium muritai</i> )
<b>Common name</b>	<b>Coastal tree broom</b>
<b>Threat category</b>	Nationally critical.
<b>Description</b>	A small, generally leafless tree up to 6m. Trunk up to 25cm diameter, with a compact canopy of branchlets, uppermost erect, lower ones pendulous. Mature branches greyish-brown with prominent trunk rings. Actively growing branches yellowish-green with distinctive brown or grey stripes. All branchlets are striped, deeply grooved and mostly round in cross-section. Flowers about 4mm long, in erect cylindrical clusters, up to 7cm long. Petals whitish, with intense purple-violet markings. Individual trees may not flower every year. Seed pods 3.5mm long, hairy, oval, with a blunt beak. Seeds one per pod, yellowish-green, 1.5mm long, 1mm wide.
<b>Habitat</b>	Deeply eroded coastal cliffs on coarse, free draining gravel and loess, colluvial fans below cliffs.
<b>Associated plants</b>	Akiraho, ngaio.
<b>Similar species</b>	<i>Carmichaelia stevensonii</i> .
<b>Distinguishing features</b>	<i>C. muritai</i> has erect mature branchlets and flower clusters. The plant is brownish tinged and lives in coastal habitats. <i>C. stevensonii</i> has a yellowish-green tinge, drooping branchlets and flower clusters and larger pods. It grows inland.
<b>Distribution</b>	Occurs only on the northern coastal cliffs of South Marlborough.



Photo: DOC South Marlborough

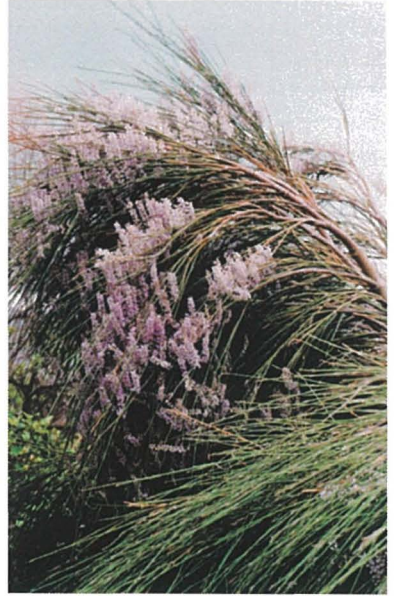
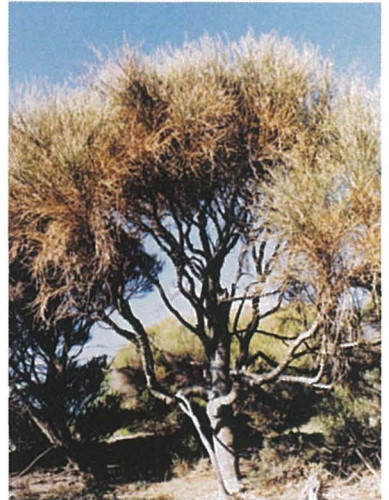


Photo: Barbara Mitcalfe



Photos: Jan Clayton-Greene



<b>Family name</b>	<b>Pea family</b> (Fabaceae)
<b>Scientific name</b>	<b><i>Carmichaelia stevensonii</i></b> (formerly <i>Chordospartium stevensonii</i> )
<b>Common name</b>	<b>Weeping tree broom, cord broom</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Leafless tree up to 8m tall, with a yellowish-green umbrella-like canopy of drooping branches. Trunk up to 30cm in diameter, slender branches round or partly compressed, grooved. Flowers small, lilac, 9mm long, in many-flowered drooping clusters up to 8cm long. Resembles wisteria. Pods hairy, diamond-shaped to rounded, 6mm long, with 1-3 yellowish green seeds per pod.
<b>Habitat</b>	Free draining colluvial or alluvial soil, rockland, steep mountain slopes.
<b>Associated plants</b>	Mountain beech, mountain toatoa, broad-leaved snow tussock, mixed broadleaved trees, manuka, tauhinu, <i>Hebe</i> species.
<b>Similar species</b>	Pink brooms, <i>C. muritai</i> .
<b>Distinguishing features</b>	<i>C. stevensonii</i> is yellow-green, has drooping branchlets and flower clusters. Actively growing branchlets of this plant have very distinctive bark with vertical orange stripes. <i>C. muritai</i> has a brownish tinge, especially on young growth, erect flower clusters and mature branchlets, smaller flowers and pods. Pink brooms are smaller, have a blue-green colour to the stem and pink flowers.
<b>Distribution</b>	Confined to inland river valleys of South Marlborough.



Photos: Shannel Courtney



Photo:  
Cathy Jones





<b>Family name</b>	<b>Pea family (Fabaceae)</b>
<b>Scientific name</b>	<b><i>Carmichaelia vexillata</i></b>
<b>Common name</b>	<b>Dwarf broom</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Dwarf, spreading broom, up to 15cm tall, 40cm wide. Stems stout, curved upwards or horizontal. Branchlets linear, 20-95mm long, 1.5-4mm wide, finely grooved, may be sparsely hairy when young, hairless at maturity; green-yellow, tips often red in winter. Simple leaves on seedlings and occasionally on mature plants, 4-7.5mm long, 2-4.5mm wide, with scattered hairs on both surfaces; leaves on flattened stems usually reduced to a hairless triangular scale. Flowers 4-5.5mm long, 2-2.5mm wide, in clusters of 2-3; purple with whitish margins, sometimes cream with purple veins; main petal upright and taller than lower petals, sepals hairless, tip of sepal long and pointed. Pod oblong, compressed, dark brown to black or light grey. Seeds 4-13 per pod, oblong, yellow to olive green with black mottling.
<b>Habitat</b>	Recent moraines, alluvium, river terraces, terrace risers, disturbed soils, and soils derived from schist parent material.
<b>Associated plants</b>	Pigweed, purple fuzzweed, native grasses.
<b>Similar species</b>	<i>Carmichaelia monroi</i> , <i>C. astonii</i> , <i>C. corrugata</i> .
<b>Distinguishing features</b>	<i>C. vexillata</i> has thin stems. The main flower petal is upright and taller than the two lower united petals. In <i>C. monroi</i> the main petal is smaller than the lower petals. <i>C. astonii</i> has hairy stems and is larger overall. <i>C. corrugata</i> has underground stems.
<b>Distribution</b>	Eastern South Island to South Canterbury and Otago.



Photos:  
Cathy Jones



<i>Family name</i>	<b>Pea family</b> (Fabaceae)
<i>Scientific name</i>	<b><i>Montigena novae-zelandiae</i></b> (formerly <i>Swainsona novae-zelandiae</i> )
<i>Common name</i>	<b>Scree pea</b>
<i>Threat category</i>	Gradual decline.
<i>Description</i>	Small, woody sub-shrub arising from thin, branched stems that extend to the surface from a deeply buried root stock. Foliage in dull green, leafy tufts, 30-70mm long, 10-60mm wide. Leaves divided, 20-35mm long. Leaflets in 6-10 pairs per leaf, usually folded along midrib; fleshy, grey-green or grey-blue and sometimes flushed red. Flowers in bunches, purplish, clover-pink or golden-brown, arising from axils of older leaves. Seed pods swollen, darkening to orange-red at maturity, grey-brown when open. Seeds 10 per pod, 3.5mm long, 3mm wide, brown.
<i>Habitat</i>	Subalpine to low alpine, on fine-grained, partially stable and moist greywacke scree, rock debris and gravel slopes. Sometimes in depleted tussock grasslands.
<i>Associated plants</i>	Tussocks, scree plants.
<i>Similar species</i>	None.
<i>Distinguishing features</i>	Large, bloated sausage shaped seed pods, fernlike leaf form.
<i>Distribution</i>	South Island, east of Southern Alps.



Photo: Cathy Jones

Photo: Shannel Courtney





<b>Family name</b>	<b>Pittosporum family</b> (Pittosporaceae)
<b>Scientific name</b>	<b><i>Pittosporum patulum</i></b>
<b>Common name</b>	<b>Pitpat</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Small, slender, narrow-leaved sub-canopy tree up to 6m tall. Many ascending branches in clump at top of long, smooth, whitish trunk. Adult leaves very dark green, 4-5cm long, 1-1.5cm wide, crowded towards tips of branchlets, leathery and narrow, with shallow teeth or smooth edges; leaf stalk short and stout. Juvenile plants black to dark green, sparsely leaved, single stemmed and easily overlooked; leaves up to 5cm long, 5mm wide, linear and bluntly toothed, like the largest leaves of juvenile pokaka. In transition, at 1-2m, they have single or branching stems; leaves change gradually into broader, tough adult form. Flowers dark red, fragrant, in umbrella shaped clumps of 4-8. Fruit, a 2-valved capsule, about 1cm diameter.
<b>Habitat</b>	Under upland beech forest, stream sides, on alluvial terraces, forest margins and in regenerating shrublands and scrub.
<b>Associated plants</b>	Beech, <i>Pittosporum divaricatum</i> , <i>Dracophyllum longifolium</i> , manuka, small-leaved <i>Coprosma</i> species, mountain toatoa.
<b>Similar species</b>	Pokaka juvenile, <i>Aristotelia fruticosa</i> juvenile.
<b>Distinguishing features</b>	Pitpat juvenile plants are tall and slim, with very dark leaves, regularly linear in shape. Pokaka and <i>Aristotelia fruticosa</i> juveniles are rounded and bushy.
<b>Distribution</b>	Eastern South Island and north-west Nelson, Canterbury, Otago.

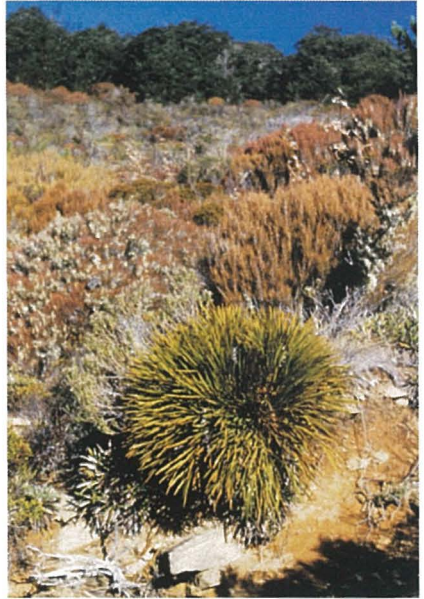


Photo: Cathy Jones

Photo:  
Andy Dennis

Photo: Shannel Courtney

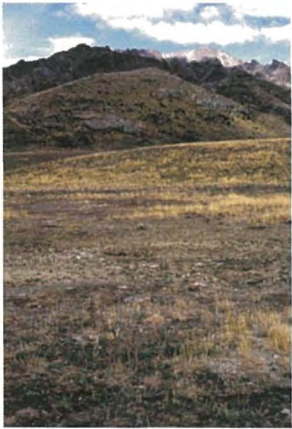


<b>Family name</b>	<b>Rush family (Juncaceae)</b>
<b>Scientific name</b>	<b><i>Luzula celata</i></b>
<b>Common name</b>	<b>Dwarf woodrush</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	An inconspicuous, creeping woodrush, forming grey-green to brownish cushion-like tufts, usually less than 4cm diameter. Sometimes half buried in sand, so that only leaf tips and flowers are visible. Leaves 1-3cm long, 0.5-1.5mm wide, folded inwards towards base, tips pointed; margins clad in long, thickly clustered, soft white hairs. Flowering stems much shorter than leaves, scarcely elongating as fruit matures. Flowers 2mm long, 6-16 in a single cluster, with minimal stalk.
<b>Habitat</b>	Shingly ground, sandy hollows, river terraces, tarn margins, often in <i>Raoulia</i> mats.
<b>Associated plants</b>	<i>Raoulia</i> species, especially <i>R. australis</i> and <i>R. hookeri</i> , <i>Scleranthus uniflorus</i> .
<b>Similar species</b>	<i>Luzula ulophylla</i> .
<b>Distinguishing features</b>	<i>Luzula celata</i> has hairy leaf margins and flowers hidden amongst leaves. <i>L. ulophylla</i> has woolly hairs on back of leaves as well as margins and flowering stems much taller than its leaves.
<b>Distribution</b>	South Island: east of the main divide.



C  
R  
E  
E  
P  
E  
R  
S  
P  
E  
C  
I  
E  
S  
O  
F  
T  
H  
E  
M  
O  
U  
N  
T  
A  
I  
N  
S

Photos: Cathy Jones





<b>Family name</b>	<b>Sedge family (Cyperaceae)</b>
<b>Scientific name</b>	<b><i>Carex carsei</i></b>
<b>Common name</b>	<b>Carse's sedge</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Creeping sedge, forming a continuous grassy sward, usually 7-15cm tall, with underground stems. Leaves 1-2.5mm wide, arching, yellow-green, grass-like, much longer than flower stems; with slightly blunt tip and fine-toothed margins. Flower stems short, 2.5-8.5cm long, 0.5-1mm wide, triangular in cross section, stiff, erect and hairless. Flower head a cluster of 3-5 yellow-brown to greenish-brown spikes, each 1.5cm long.
<b>Habitat</b>	In swampy places, boggy ground and wet forest clearings.
<b>Associated plants</b>	Other <i>Carex</i> species, rushes, <i>Chionochloa rubra</i> .
<b>Similar species</b>	<i>Carex flaviformis</i> .
<b>Distinguishing features</b>	<i>C. carsei</i> has leaves 1-2.5mm wide, flower stems up to 8.5cm tall and 1mm wide. <i>C. flaviformis</i> has leaves 2-3mm wide and flower stems 10-15cm tall, 1-1.5mm wide.
<b>Distribution</b>	North Island: Lake Taupo and Tongariro National Park. South Island: western areas and Marlborough.



Photos: Cathy Jones



Photo: Shannel Courtney



<b>Family name</b>	<b>Sedge family (Cyperaceae)</b>
<b>Scientific name</b>	<b><i>Carex inopinata</i></b>
<b>Common name</b>	<b>Grassy mat sedge</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Inconspicuous leafy, mat-forming sedge with long creeping rhizomes up to 0.5mm in diameter. Leaves grass-like, 2mm wide, to 25cm long but usually much shorter; very fine teeth on upper third of margin. Flower stems up to 6cm tall, each with a very slender spike of male flowers at the top and 2-3 shortly-stalked female flowers at the base. Fruits 6-7mm long, red-brown, oval and pointed at one end; very low in centre of plant.
<b>Habitat</b>	Low forest or shrublands with relatively open canopy and partially shaded understory. Fertile substrates in low to moderate rainfall areas, free of recent disturbance. Sometimes at the base of limestone and schist rocks.
<b>Associated plants</b>	Kanuka, rohutu, weeping matipo, <i>Coprosma crassifolia</i> .
<b>Similar species</b>	<i>Carex breviculmis</i> , small hook sedges.
<b>Distinguishing features</b>	<i>Carex inopinata</i> has fine teeth on leaf margins at tip of leaf only and few large, red-brown fruit, often under leaf litter. <i>C. breviculmis</i> has smaller fruit higher up the stem when growing in the shade, and shorter, wider leaves when growing in the open. Hook sedges and <i>C. breviculmis</i> have teeth on the whole of the leaf margins.
<b>Distribution</b>	South Marlborough, Canterbury and Otago.



Photo: Cathy Jones

Photo: Shannel Courtney



Photo: Cathy Jones



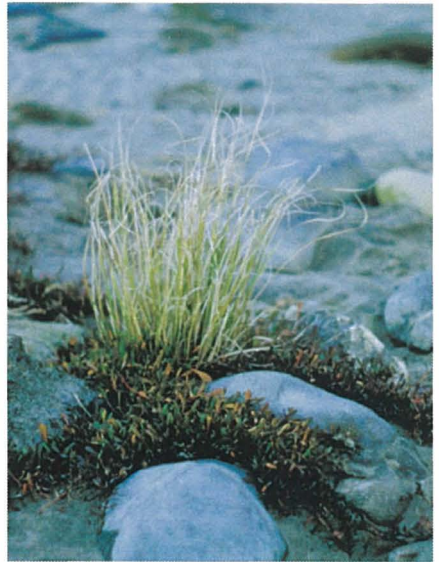


<b>Family name</b>	<b>Sedge family (Cyperaceae)</b>
<b>Scientific name</b>	<b><i>Carex litorosa</i></b>
<b>Common name</b>	<b>Sea sedge</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	Tufted sedge, forming dense, erect tussocks, pale green or straw-coloured, occasionally reddish, up to 70cm tall. Stem 9-65cm long, about 1mm wide, hairless. Leaves same length or longer, 1-1.5mm wide, with margins slightly serrated towards the bluntish tip. Flower heads 1-2cm long, oval, with 3-5 erect spikes; terminal spike male, very pale brown and slender, remaining spikes female, pale brown, maturing dark brown.
<b>Habitat</b>	Coastal, brackish marshes and sandy tidal river banks.
<b>Associated plants</b>	<i>Leptocarpus similis</i> , <i>Selliera radicans</i> , sea rush, glasswort.
<b>Similar species</b>	Other <i>Carex</i> species.
<b>Distinguishing features</b>	<i>Carex litorosa</i> has erect light brown spikelets and grows in a distinctive habitat.
<b>Distribution</b>	North and South Island.

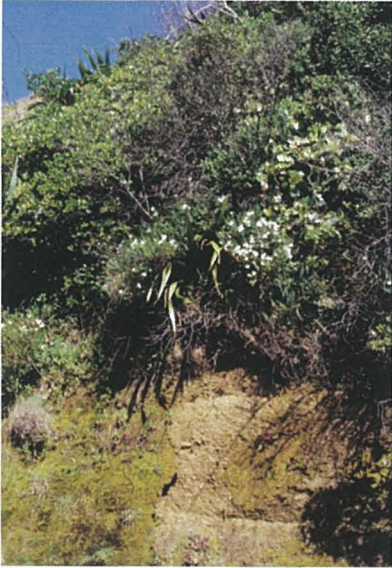


Photos: Cathy Jones

Photo: Colin Ogle



<b>Family name</b>	<b>Sedge family (Cyperaceae)</b>
<b>Scientific name</b>	<b><i>Carex raoulii</i></b>
<b>Common name</b>	<b>Coastal forest sedge, Raoul's sedge</b>
<b>Threat category</b>	Data deficient.
<b>Description</b>	Densely tufted sedge, up to 90cm tall. Leaves dark green, soft, grassy, much shorter than stems, 2-4mm wide and double folded; margins with very fine teeth. Stems erect, 50-90cm tall, 0.5-1mm wide, triangular, hairless, with fine teeth below flower head. Flower heads with 5-7 light reddish-brown spikes, about 4cm long, 5mm wide. Seed capsules light reddish brown, usually with very distinct pale brown nerves and minute teeth on margins.
<b>Habitat</b>	In coastal scrub or forest.
<b>Associated plants</b>	Mahoe, kanuka and large-leaved <i>Coprosma</i> species.
<b>Similar species</b>	<i>Carex testacea</i> .
<b>Distinguishing features</b>	<i>C. raoulii</i> leaves are double folded (w-shaped) and dark green; flower stems are up to 90cm tall. <i>Carex testacea</i> has channelled (v-shaped) light green to reddish leaves and a flower stem which may elongate to 3m when mature.
<b>Distribution</b>	North Island and eastern South Island.



Photos: Cathy Jones

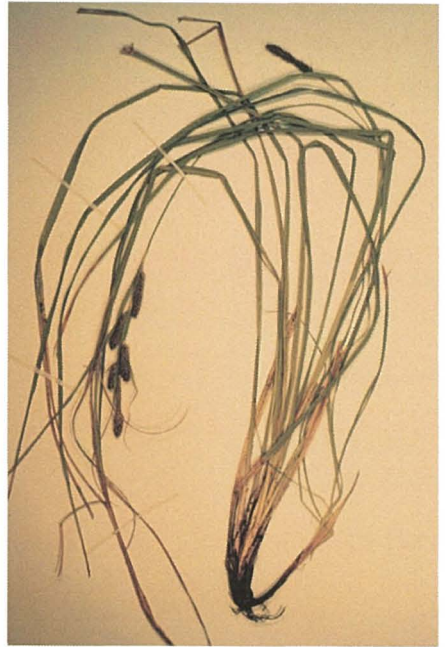


Photo: Colin Ogle



<b>Family name</b>	<b>Sedge family (Cyperaceae)</b>
<b>Scientific name</b>	<b><i>Desmoschoenus spiralis</i></b>
<b>Common name</b>	<b>Pingao, golden sand sedge</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Tuft forming sedge with underground runners. Leaves linear, curved, green to orange, 30-90cm long, 2-5mm wide; coarse, with serrated margins. Runners thick, 1-1.5cm diameter, hard and woody. Flowers dark brown, arranged in a spiral pattern on 15-30cm tall flower head. Stem to 90cm tall. Seeds 3-5mm long, oval and shiny black.
<b>Habitat</b>	On seaward faces of coastal foredunes with moderate sand movement, sometimes extending to active rear dunes.
<b>Associated plants</b>	Spinifex, sand tussock, marram grass, sand convolvulus, <i>Carex pumila</i> .
<b>Similar species</b>	None.
<b>Distinguishing features</b>	Distinctive overall orange colouring of plant and spiral seed heads.
<b>Distribution</b>	Scattered from North Cape to Stewart Island.

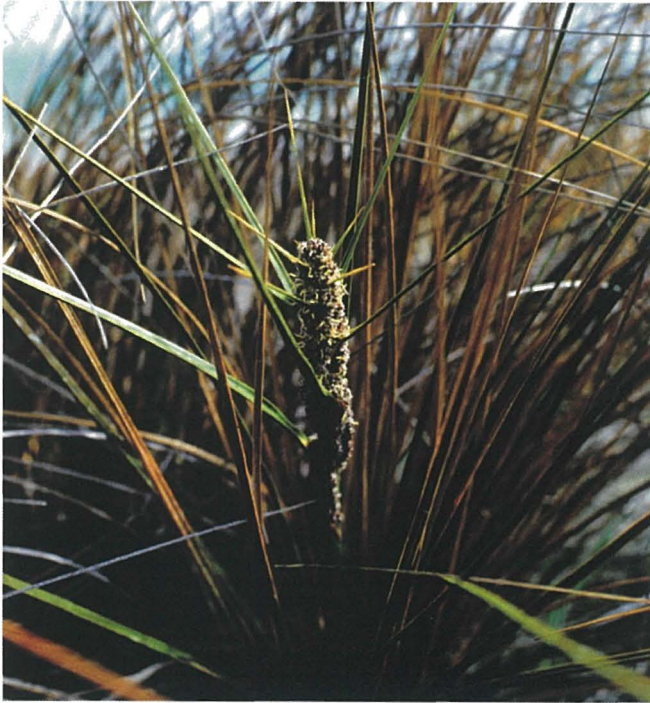


Photo: Shannel Courtney



Photo: Shannel Courtney

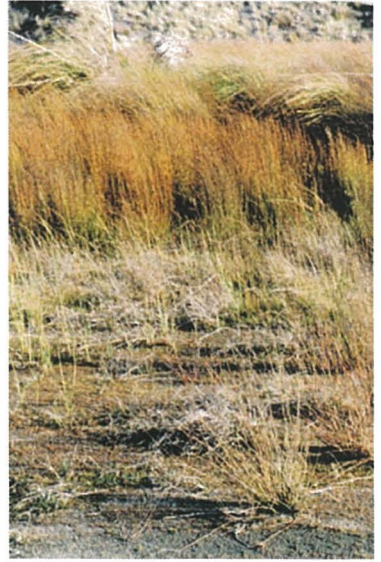


Photo: Cathy Jones

<b>Family name</b>	<b>Sedge family (Cyperaceae)</b>
<b>Scientific name</b>	<b><i>Isolepis basilaris</i></b>
<b>Common name</b>	<b>Pygmy clubrush</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	A very small rush with dense tufts, 3-9cm across, bright green above, reddish brown below. Leaves 1-4cm long, 0.5mm wide; 1-2 per flower stem. Flower stem very short. Flowers small, greenish, nestling among leaf bases. Nut 0.5mm long, flat on one side, very dark brown.
<b>Habitat</b>	Lowland to upland, up to 700m altitude. On damp, sandy or silty margins of lagoons, tarns, ephemeral lakes and rivers, freshwater or brackish.
<b>Associated plants</b>	<i>Puccinellia stricta</i> , <i>Lilaeopsis</i> species, <i>Schoenoplectus pungens</i> , arrow grass.
<b>Similar species</b>	<i>Isolepis caligenis</i> .
<b>Distinguishing features</b>	<i>I. basilaris</i> has 1-2 leaves per tuft, very short flower stems with spikelets hidden among leaves and very dark brown nuts, flat on one side. <i>I. caligenis</i> has 2-5 leaves per tuft, longer flower stems and pearly grey nuts, rounded on both sides. Occasionally <i>I. basilaris</i> with elongated flower stems is difficult to distinguish from <i>I. caligenis</i> if fruit is immature.
<b>Distribution</b>	Hawkes Bay to Southland.



Photo: Andrew Townsend



Photos: Jill Rapson





<b>Family name</b>	<b>Spurge family</b> (Euphorbiaceae)
<b>Scientific name</b>	<b><i>Euphorbia glauca</i></b>
<b>Common name</b>	<b>Shore spurge, waiu-o-kahukura</b>
<b>Threat category</b>	Serious decline.
<b>Description</b>	Semi-woody herb up to 1m tall, with erect stems, milky sap and underground runners. Leaves bluish-green, oblong, 2-12cm long, 1.5-2.5cm wide. Juvenile leaves and stems often have a reddish tinge. Flowers near tips of stems, minute, in small groups surrounded by a red cup-shaped structure, with dark crimson to purple, crescent-shaped glands around the rim. Capsule drooping, 3-lobed, changing from green to pale brown as it ripens. Seeds smooth, pale yellow to purplish-brown, 3-7mm long, 3mm wide.
<b>Habitat</b>	Generally open sand dunes, also gravel, rocky areas, coastal banks, seepages near shore, and limestone.
<b>Associated plants</b>	Sand tussock, pingao, <i>Spinifex sericeus</i> , <i>Linum monogynum</i> .
<b>Similar species</b>	Garden and weedy species of <i>Euphorbia</i> .
<b>Distinguishing features</b>	<i>Euphorbia glauca</i> has red to purple glands surrounding flowers.
<b>Distribution</b>	North and South Island.



Photos: Cathy Jones



Photo: Shannel Courtney



<b>Family name</b>	<b>Stonecrop family (Crassulaceae)</b>
<b>Scientific name</b>	<b><i>Crassula peduncularis</i></b> (formerly <i>Tillaea purpurata</i> )
<b>Common name</b>	<b>Shore stonecrop</b>
<b>Threat category</b>	Nationally endangered.
<b>Description</b>	Delicate, succulent annual to 5cm tall, forming loose cushions. Stems very fine, prostrate to ascending, with prominent short side branches; rooting at nodes. Leaves linear, to 1.5mm long, with sharply pointed tips, arranged in opposite pairs and joined together at base; gaps between leaf pairs 5-10mm. Flowers 2mm diameter, petals reddish green with pink or white margins, tapering to a fine point; sepals equal, not pointed. Flower stalk hair-like, elongating to 10mm or more in fruit.
<b>Habitat</b>	Coastal and inland lake margins and stream banks, ephemeral wetlands, cliff top turf, uplifted terraces in shallow ponds among greywacke tors.
<b>Associated plants</b>	<i>Limosella lineata</i> , <i>Myriophyllum</i> species.
<b>Similar species</b>	Other <i>Crassula</i> species, mosses.
<b>Distinguishing features</b>	<i>C. peduncularis</i> has long, hair-like fruiting stems resulting in fruits standing above plant. Unlike mosses, <i>C. peduncularis</i> has roots.
<b>Distribution</b>	North and South Island in the east.



Photo: Andrew Townsend

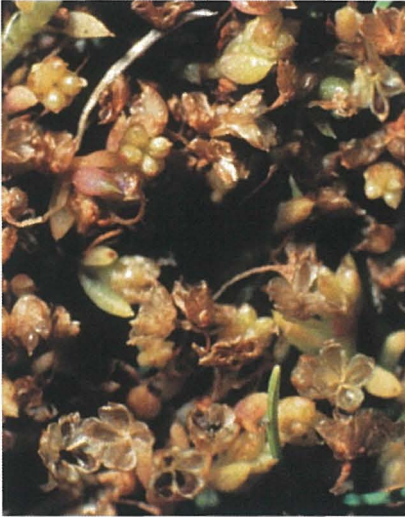


Photo:  
Colin Ogle



Photos: Andrew Townsend





<b>Family name</b>	<b>Verbena family (Verbenaceae)</b>
<b>Scientific name</b>	<b><i>Teucriidium parvifolium</i></b>
<b>Common name</b>	<b>Native verbena</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	A softly woody, twiggy shrub up to 1.5m tall. Branches thin, 4-angled, yellow-green or brown, long and slender, developing from base. Leaves spoon-shaped, opposite, 4-12mm long; dull, thin and pliable, green, often brown-green in exposed situations; slightly hairy with untoothed or irregularly lobed margins. Flowers 8mm long, solitary in leaf axils, white with five petals. Capsule small, round, 4-lobed, brown and dry, in a star-shaped head; splitting into 4 hairy segments when ripe.
<b>Habitat</b>	Very fertile soil, along river banks on forest margins, in clearings, under light vegetation on limestone and volcanic substrates.
<b>Associated plants</b>	Kowhai, ribbonwood, lacebark, <i>Coprosma propinqua</i> , <i>C. rigida</i> , <i>C. virescens</i> .
<b>Similar species</b>	Small leaved <i>Coprosma</i> species, especially shade forms of <i>C. crassifolia</i> , <i>Neomyrtus pedunculata</i> .
<b>Distinguishing features</b>	<i>Teucriidium parvifolium</i> has obvious star-shaped seed heads, dry fruit and 4-angled yellow-green branches with clumped stems growing from base. Fruit of <i>Coprosma crassifolia</i> is fleshy, yellow or white and stems are round in cross section. <i>Neomyrtus pedunculata</i> has shiny whitish-green leaves and orange-yellow berries on fine, 15mm long stems.
<b>Distribution</b>	North and South Island.



Photo: DOC South Marlborough



Photo: Jan Clayton-Greene

Photo: John Smith-Dodsworth

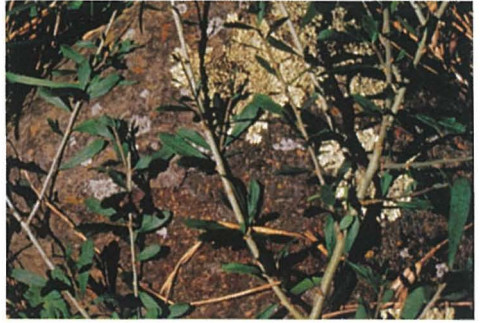


Photo: Shannel Courtney



<b>Family name</b>	<b>Violet Family (Violaceae)</b>
<b>Scientific name</b>	<b><i>Melicytus aff alpinus</i> “Waipapa”</b>
<b>Common name</b>	<b>Porcupine scrub</b>
<b>Threat category</b>	Gradual decline.
<b>Description</b>	Compact shrub with short, stout, whitish or grey, spine-like branchlets. Leaves 1-2cm long, 0.5cm wide, dark green, absent from branch tips; some young leaves lobed. Sheltered plants slender, taller and more leafy. Flowers pale yellow, small, bell-shaped, hanging under branchlets. Fruit white, sometimes blotched with grey, oval to pear-shaped.
<b>Habitat</b>	Coastal to upland scrub and forest margins, to about 600m altitude.
<b>Associated plants</b>	Kanuka, pohuehue, <i>Coprosma propinqua</i> , <i>Coprosma crassifolia</i> .
<b>Similar species</b>	<i>Melicytus alpinus</i> , <i>M. crassifolius</i> .
<b>Distinguishing features</b>	<i>M. aff. alpinus</i> “Waipapa” has broader leaves, some lobed, and oval to pear-shaped fruit. <i>M. alpinus</i> has narrow, unlobed leaves, spherical fruit, grey-green when young, and usually occurs at higher altitudes. <i>M. crassifolius</i> is coastal, has a tendency to sprawl and has much thicker leaves and stems.
<b>Distribution</b>	South Island down to Canterbury.





Photos: Cathy Jones







## Selected Bibliography

- Allan, H. H. 1961. *Flora of New Zealand. Volume 1: Indigenous tracheophyta*. Wellington: Government Printer.
- Burrows, C. J. (Ed.). 1998. *Etienne Raoul and Canterbury Botany 1840-1996*. Christchurch: Canterbury Botanical Society Special Publication and Manuka Press.
- Connor, H. E. 2000. *Flora of New Zealand. Volume V: Gramineae*. Lincoln: Manaaki Whenua Press.
- Eagle, A. 1975. *Eagle's trees and shrubs of New Zealand in colour*. Auckland: William Collins Ltd.
- Eagle, A. 1982. *Eagle's trees and shrubs of New Zealand in colour: second series*. Auckland: William Collins Publishers Ltd.
- Given D. R. 1981. *Rare and Endangered Plants of New Zealand*. Wellington: Reed Ltd.
- Healy, A. J. & Edgar, E. 1980. *Flora of New Zealand. Volume III: Adventive cyperaceous, petalous & spathaceous monocotyledons*. Wellington: Government Printer.
- Hitchmough, R. (Compiler). 2002. *New Zealand Threat Classification System Lists*. Wellington: Department of Conservation. (In press).
- Johnson, P. N. & Brooke, P. A. 1998. *Wetland plants in New Zealand*. Lincoln: Manaaki Whenua Press.
- Mark, A. F. & Adams, N. M. 1995. *New Zealand alpine plants*. Auckland: Godwit Publishing Ltd.

## Selected Bibliography continued

- Molloy, J., Bell, B., Clout, M., de Lange, P., Gibbs, G., Given, D., Norton, D., Smith, N. & Stephens, T. 2001. *Classifying species according to threat of extinction. A System for New Zealand*. Wellington: Department of Conservation.
- Moore, L. B. & Edgar E. 1976. *Flora of New Zealand. Volume II: Indigenous Tracheophyta*. Wellington: Government Printer.
- Moore, L. B. & Irwin J. B. 1978. *The Oxford book of New Zealand plants*. Wellington: Oxford University Press.
- Nicol, E. R. 1997. *Common names of plants in New Zealand*. Lincoln: Manaaki Whenua Press.
- Poole, A. L., Adams, N. M. 1994. *Trees and shrubs of New Zealand*. Lincoln: Manaaki Whenua Press.
- Raven, P. H. & Raven, T. E. 1976. *The genus epilobium in Australasia*. Christchurch: DSIR, Botany Division.
- Webb, D. J., Sykes, W. R. & Garnock-Jones, P. J. 1988. *Flora of New Zealand IV: Naturalised pteridophytes, gymnosperms, dicotyledons*. Christchurch: DSIR Publishing.
- Wilson, C. M. & Given, D. R. 1989. *Threatened Plants of New Zealand*. Wellington: DSIR Publishing.
- Wilson, H. D. 1996. *Wild plants of Mount Cook National Park*. Christchurch: Manuka Press.
- Wilson, H. D. 1994. *Field guide to Stewart Island plants*. Christchurch: Manuka Press.

## Selected Bibliography continued

Wilson, H. D. & Galloway, T. 1993. *Small leaved shrubs of New Zealand*. Christchurch: Manuka Press.

Webb, C., Johnson, P. & Sykes, B. 1990. *Flowering plants of NZ*. Christchurch: DSIR Botany Division.





## Common name index

Buttercup family	2
Cabbage family	6
Carrot family	22
Carse's sedge	148
Castle Hill forget-me-not	74
Celadon mat daisy	62
Chalk cress	12
Channelled bluegrass	106
Chickweed family	28
Climbing broom	134
Climbing groundsel	34
Coastal cushion daisy	58
Coastal forest sedge	154
Coastal tree broom	136
Coffee family	30
Coral broom	130
Cord broom	138
Cypress hebe	84
Daisy family	34
Deciduous tree daisy	52
Delicate myrrh	26
Dock family	66
Dryland button daisy	50
Dryland cress	20
Dwarf broom	140
Dwarf woodrush	146
Fan-leaved mat daisy	60
Fathen family	68
Fish-guts plant	68
Forget-me-not family	72
Foxglove family	84
Fuchsia family	92
Gentian family	98
Golden mistletoe	116
Golden sand sedge	156
Grass family	100

## Common name index continued

Grassland wheatgrass	110
Grassland willowherb	96
Grassy mat sedge	150
Hairless cress	16
Hairy willowherb	94
Heart-leaved mountain daisy (Bounds Range)	38
Heart-leaved mountain daisy (Richmond Range)	40
Heath family	112
Hector's tree daisy	52
High alpine cress	14
Ivy family	114
Kirk's broom	134
Korukoru	118
Leafy mistletoe family	116
Leatham woollyhead	42
Limestone wheatgrass	100
Lyttelton forget-me-not	72
Marlborough daisy	54
Marsh willowherb	92
Matt leaved mazus	90
Mingimingi	66
Mint family	124
Mud buttercup	4
Native bedstraw	32
Native bittercress ( <i>Cardamine</i> aff. <i>bilobata</i> )	8
Native bittercress ( <i>Cardamine bilobata</i> )	10
Native carrot	22
Native verbena	164
Nettle family	126
New Zealand mousetail	2
New Zealand skullcap	124
Papataniwha	46
Pea family	128
Pikiraki	120
Pikirangi	120
Pin cushion	28

## Common name index continued

Pingao	156
Pink broom	128
Piriraki	116
Pirirangi	120
Pirita (yellow-flowered mistletoe)	116
Pirita (scarlet mistletoe)	118
Pirita (red mistletoe)	120
Pirita (green or white mistletoe)	122
Pitpat	144
Pittosporum family	144
Porcupine scrub	166
Prostrate bluegrass	108
Pygmy clubrush	158
Pygmy forget-me-not	80
Raoul's sedge	154
Raukawa	114
Red mistletoe	120
Rush family	146
Sand tussock	102
Scarlet mistletoe	118
Scree gentian	98
Scree pea	142
Sea holly	24
Sea sedge	152
Sedge family	148
Sedgemere woollyhead	44
Shore spurge	160
Shore stonecrop	162
Shovel mint	124
Shrub pohuehue	66
Shrubby tororaro	66
Slender button daisy	48
Small fathen	70
Small-leaved coprosma	30
Sprawling inaka	112
Sprawling turpentine shrub	112
Spurge family	160



## Common name index continued

Starry cress	18
Stonecrop family	162
Swamp nettle	126
Taapia	122
Tangle broom	132
Tapuae-o-Uenuku forget-me-not	82
Tiny flowered forget-me-not	78
Tufted hair-grass	104
Tupia	122
Turf cress	6
Verbena family	164
Violet family	166
Waiautoa forget-me-not	76
Waiautoa sun hebe	88
Waiu-o-kahukura	160
Ward daisy	36
Weeping tree broom	138
Whipcord hebe	86
White fuzzweed	64
White mistletoe	122
Wiggwig	66
Yellow-flowered mistletoe	116
Zoo cudweed	56

## Scientific name index

<i>Alepis flavida</i>	116
Apiaceae	22
Araliaceae	114
Asteraceae	34
<i>Australopyrum calcis</i> ssp. <i>calcis</i>	100
<i>Austrofestuca littoralis</i>	102
Boraginaceae	72
<i>Brachyglottis sciadophila</i>	34
<i>Brachyscome</i> "Ward"	36
Brassicaceae	6
<i>Cardamine</i> aff. <i>bilobata</i>	8
<i>Cardamine bilobata</i>	10
<i>Cardamine</i> "tarn"	6
<i>Carex carsei</i>	148
<i>Carex inopinata</i>	150
<i>Carex litorosa</i>	152
<i>Carex raoulii</i>	154
<i>Carmichaelia carmichaeliae</i>	128
<i>Carmichaelia crassicaule</i>	130
<i>Carmichaelia juncea</i>	132
<i>Carmichaelia kirkii</i>	134
<i>Carmichaelia muritai</i>	136
<i>Carmichaelia stevensonii</i>	138
<i>Carmichaelia vexillata</i>	140
Caryophyllaceae	28
<i>Celmisia cordatifolia</i> var. <i>brockettii</i>	38
<i>Celmisia cordatifolia</i> var. <i>similis</i>	40
<i>Cheesemanina</i> aff. <i>fastigiata</i> "Chalk Range"	12
<i>Cheesemanina ensyia</i>	14
<i>Cheesemanina fastigiata</i>	16
<i>Cheesemanina stellata</i>	18
Chenopodiaceae	68
<i>Chenopodium detestans</i>	68
<i>Chenopodium pusillum</i>	70
<i>Colobanthus brevisepalus</i>	28
<i>Coprosma obconica</i> ssp. <i>obconica</i>	30

## Scientific name index continue

<i>Craspedia</i> "Leatham"	42
<i>Craspedia</i> "tarn"	44
Crassulaceae	162
<i>Crassula peduncularis</i>	162
Cyperaceae	148
<i>Daucus glochidiatus</i>	22
<i>Deschampsia cespitosa</i>	104
<i>Desmoschoenus spiralis</i>	156
<i>Dracophyllum uniflorum</i> var. <i>frondosum</i>	112
<i>Elymus</i> aff. <i>solandri</i> "Channel"	106
<i>Elymus tenuis</i>	108
<i>Epilobium chionanthum</i>	92
<i>Epilobium birtigerum</i>	94
<i>Epilobium pictum</i>	96
Ericaceae	112
<i>Eryngium vesiculosum</i>	24
Euphorbiaceae	160
<i>Euphorbia glauca</i>	160
Fabaceae	128
<i>Galium trilobum</i>	32
<i>Gentianella bellidifolia</i> var. <i>magnifica</i> "Barefell"	98
Gentianaceae	98
<i>Hebe cupressoides</i>	84
<i>Hebe salicornioides</i>	86
<i>Heliobebe acuta</i>	88
<i>Ischnocarpus novae-zelandiae</i>	20
<i>Isolepis basilaris</i>	158
Juncaceae	146
<i>Lagenifera montana</i>	46
Lamiaceae	124
<i>Leptinella filiformis</i>	48
<i>Leptinella serrulata</i>	50
Loranthaceae	116
<i>Luzula celata</i>	146
<i>Mazus novaezeelandiae</i> ssp. <i>impolitus</i>	90
<i>Melicytus</i> aff. <i>alpinus</i> "Waipapa"	166

## Scientific name index continued

<i>Montigena novae-zelandiae</i>	142
<i>Muehlenbeckia astonii</i>	66
<i>Myosotis australis</i> var. <i>lytteltonensis</i>	72
<i>Myosotis colensoi</i>	74
<i>Myosotis laingii</i>	76
<i>Myosotis pygmaea</i> var. <i>minutiflora</i>	78
<i>Myosotis pygmaea</i> var. <i>pygmaea</i>	80
<i>Myosotis</i> "Tapuae-o-Uenuku"	82
<i>Myosurus minimus</i> ssp. <i>novae-zelandiae</i>	2
<i>Olearia Hectorii</i>	52
Onagraceae	92
<i>Oreomyrrhis colensoi</i> var. <i>delicatula</i>	26
<i>Pachystegia minor</i>	54
<i>Peraxilla colensoi</i>	118
<i>Peraxilla tetrapetala</i>	120
Pittosporaceae	144
<i>Pittosporum patulum</i>	144
Poaceae	100
Polygonaceae	66
<i>Pseudognaphalium</i> "Zoo"	56
Ranunculaceae	2
<i>Ranunculus limosella</i>	4
<i>Raoulia</i> aff. <i>bookeri</i> "coast"	58
<i>Raoulia monroi</i>	60
<i>Raoulia parkii</i>	62
<i>Raukaua edgerleyi</i>	114
Rubiaceae	30
Scrophulariaceae	84
<i>Scutellaria novae-zelandiae</i>	124
<i>Stenostachys laevis</i>	110
<i>Teucrium parvifolium</i>	164
<i>Tupeia antarctica</i>	122
Urticaceae	126
<i>Urtica linearifolia</i>	126
Verbenaceae	164
Violaceae	166
<i>Vittadinia australis</i>	64