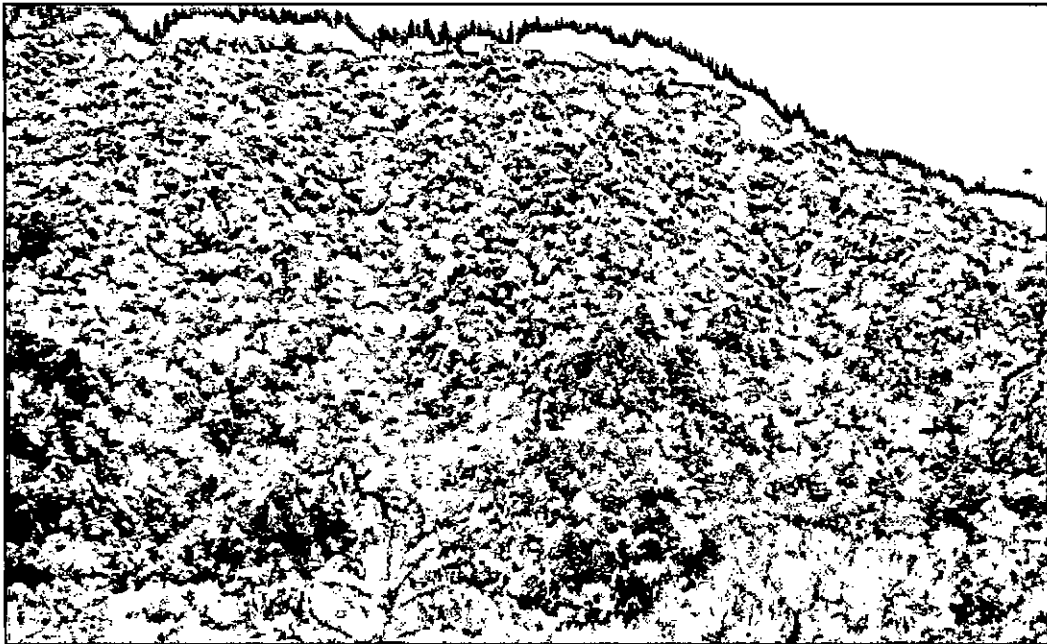


TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS
SURVEY

SANGSTER PROPERTY



Report prepared for Timaru District Council by Mike Harding
December 2014

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: Bruce Sangster and Lynette Coleman
Valuation Reference: ... 24670/037.00
Address: Maori Gully Road
Location: Lower northeast slopes of Waitohi Hill
Ecological Districts: Boundary of Orari and Geraldine
TDC Land Type:..... 'Southeast hill country and mountains'
Land Environments: Q2.1a

ECOLOGICAL CONTEXT:

The property lies on the lower northeast slopes of the Waitohi Hill in Pleasant Valley, Te Moana. It lies on the boundary of Geraldine and Orari ecological districts (McEwen, 1987). The property lies in the Q2.1a Level IV Land Environment as defined by Leathwick *et al* (2003).

It is likely that the original vegetation of this area was predominantly podocarp-hardwood forest, dominated by kahikatea, matai, totara, kowhai, broadleaf, lemonwood, mahoe, narrow-leaved lacebark and other hardwood trees. Kanuka and manuka low-forest/shrubland may have occupied disturbed sites. Sedgeland and rushland (wetland) vegetation would have been present at poorly drained valley-floor sites.

Today the original forest cover in this part of the Geraldine and Orari ecological districts is largely confined to remnants in gullies or on steep slopes. Otherwise, the indigenous vegetation of the ecological district is substantially depleted or modified. The indigenous fauna would have originally been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area. The property lies at the edge of the known range of long-tailed bat (at nationally threatened species), though it is possible that bats are no longer present in the area.

SIGNIFICANT AREAS ON THE PROPERTY:

Indigenous vegetation on the property comprises remnant podocarp trees and regenerating podocarp-hardwood forest with kanuka. Indigenous vegetation on the property adjoins other areas of indigenous forest in Geraldine Forest (Blakely Pacific) and contributes to the network of fauna habitat in the wider area.

The property was surveyed as part of the District-wide survey of Significant Natural Areas during November 2014. One area, comprising approximately 9.8 hectares, is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria.

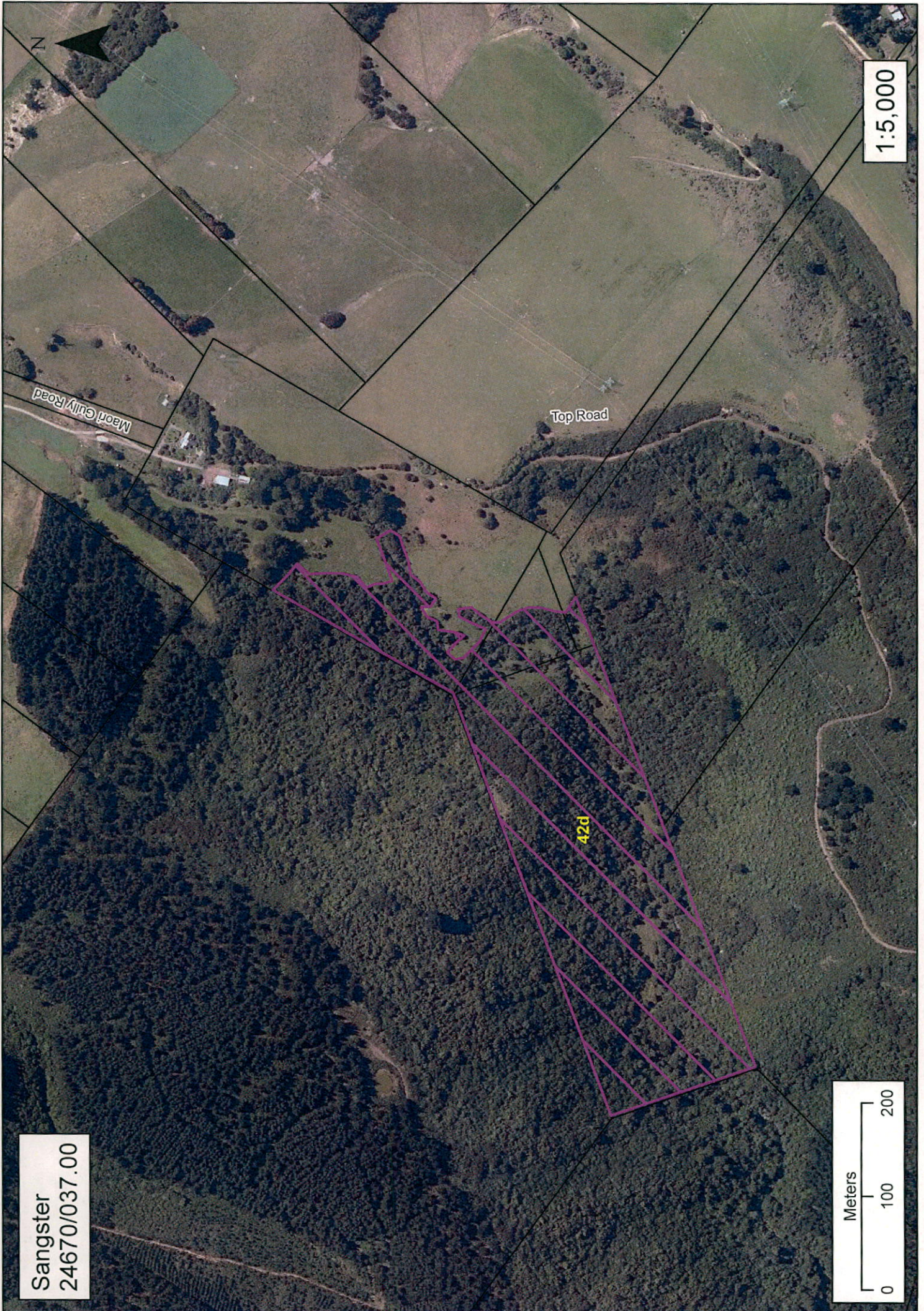
Area No.	Area Name	Map reference (NZTM)	Aprox. size (ha)	Vegetation/habitat type
42d	Maori Gully North	1450066E-5118218N	c. 9.8	Podocarp hardwood forest

The boundaries of this SNA are illustrated on the aerial photograph and the values described on the SNA Form in this report. Note that the boundaries of the SNA are indicative, rather than precise. This area meets the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and is considered to be sustainable in the long term, or sustainable with appropriate management (criterion vii, page B19). SNAs are subject to confirmation by Council after regarding the matters listed in the District Plan (pages B19-B20). It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan change.

At present, consent is required from Council for clearance of areas of indigenous vegetation or habitat which meet the Interim Definitions in the District Plan. Clearance includes burning, track construction, spraying with herbicides and over-planting.

To assist with the protection and management of any SNA, landowners can apply to Council for financial assistance. Any questions regarding the protection, management and use of SNAs should be directed to the District Planner.

Sangster
24670/037.00



1:5,000

Meters
0 100 200

Area Name: Maori Gully North	Property: Bruce Sangster & Lynette Coleman
Central map ref. (NZTM): 1450066E-5118218N	Nearest Locality: Pleasant Valley
Ecological District: Orari	Area Size (ha): 9.8 Altitude (m): 220-300
Surveyors: Mike Harding and Bruce Sangster	Survey Time: 3 hrs Survey Date: 11-11-14

General Description:

This SNA lies on the lower south- and east-facing slopes of Maori Gully on the northeast flank of Waitohi Hill, Pleasant Valley. It also includes small open terraces on the upper valley floor and a small part of the lower slopes on the other (south) side of the upper valley. It is part of a much larger area of indigenous forest on adjacent properties (SNA 42a and SNA 39b).

Plant Communities:

The main plant community present is podocarp hardwood forest, with larger podocarp trees on the valley floor and younger regenerating forest on valley sides, as described below. Naturalized (exotic) species are indicated with an asterisk*.

Valley-floor terrace forest:

The forest canopy here is dominated by totara and kahikatea. Other canopy or sub-canopy species are kowhai, matai, lemonwood, narrow-leaved lacebark, rohutu, mapou, wineberry, kanuka and native jasmine.

Dominant understorey species are *Coprosma rotundifolia*, *Coprosma rhamnoides* and saplings of kahikatea. Other understorey species are mahoe, rohutu, pate, horopito, *Coprosma crassifolia*, poataniwha, native jasmine and saplings of totara and matai.



Lower slopes and valley-floor at lower (east) end of SNA 42d

Ground-cover species are *Blechnum penna-marina*, *Blechnum fluviatile*, crown fern, swamp kiokio, hen and chickens fern, necklace fern, prickly shield fern, *Clematis marata*, nettle, hookgrass, bidibid, hairy pennywort, buttercup, cardamine, wall lettuce*, an orchid *Nematoceras macranthum*, the rare herb *Australina pusilla* and seedlings of kahikatea, fuchsia, marbleleaf, broadleaf, lancewood and *Coprosma* species.

Additional species present on the forest margin are *Coprosma propinqua*, gorse*, koromiko, lawyer, pohuehue, thousand-leaved fern, hard fern, creeping buttercup*, giant buttercup*, foxglove*, Californian thistle*, burdock* and small ash* trees. Also present in the lower valley near the homestead (not within the SNA) are macrocarpa*, crack willow*, holly*, passionfruit*, blackberry*, velvety nightshade*, *Epilobium nummularifolium* and male fern*.

Hill slope forest:

The hill-slope forest canopy is dominated in most places by mahoe and young totara trees. Other canopy species are kahikatea, kanuka, marbleleaf, broadleaf, lemonwood, kowhai, lancewood, mapou, narrow-leaved lacebark, cabbage tree, clematis, bush lawyer, native bindweed and native jasmine.

Understorey species are mahoe, *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma crassifolia*, rohutu, mapou, horopito, five-finger, broadleaf, lemonwood, marbleleaf, narrow-leaved lacebark, *Neomyrtus pendunculata*, poataniwha, supplejack (uncommon), native jasmine and saplings of totara and kahikatea.

Hen and chickens fern is the dominant ground cover species. Other plant species present are *Blechnum chambersii*, *Blechnum fluviatile*, *Blechnum procerum*, mountain kiokio, crown fern, hound's tongue fern, prickly shield fern, common shield fern, hookgrass, nettle, pennywort, bush lily and seedlings of mahoe, mapou, marbleleaf, lancewood, broadleaf, rohutu, totara and matai.



Hill-slope forest in SNA 42d, viewed from across the valley

Species present at forest openings are Himalayan honeysuckle*, *Coprosma dumosa*, *Coprosma propinqua*, elderberry*, fuchsia, pate and thousand-leaved fern.

Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, rifleman, fantail, grey warbler, brown creeper, tomtit and kereru (NZ pigeon). Other species likely to be present are silvereye, kingfisher and karearea (NZ falcon).

Notable Flora, Fauna and Habitats:

Important features of this area are: the habitat it provides for forest birds; the presence of podocarp trees, including larger trees on the valley floor; the diversity of plant species (55 vascular species); the

presence of two locally uncommon plant species (the herb *Australina pusilla* and orchid *Nematoceras macranthum*); and that the area is part of a larger area of forest.

Notable Plant and Animal Pests:

Ash is the most important plant pest present. It is present at the forest margin on the valley floor. Other naturalized plant species present, such as Himalayan honeysuckle, elderberry and gorse, do not pose a significant threat to the forest. Other species present nearby (passionfruit and holly) may pose a threat. Animal pests were not surveyed, though possum and feral pig sign was observed.

Boundaries (buffering, fencing, adjoining plant communities and habitats):

This area is well buffered by its location on steeper slopes in the upper valley and within a larger area of indigenous forest. The forest margins are not fenced, though the area appears to be only lightly or periodically grazed.

Condition and Management Issues:

The main management issues are control of invasive plant pests (ash, holly and passionfruit), continued wild animal control and protection of the forest margin from intensive grazing.

Property Owner Comment:

Mr Sangster appreciates the ecological value of the forest and intends to continue to protect it from disturbance.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous forest typical of the ecological district and supporting a good range of representative canopy species (including totara, kahikatea and matai).
Rarity	L/M	Supports populations of two locally uncommon plant species.
Diversity and pattern	M	Moderate plant species diversity.
Distinctiveness/special features	M	The presence of taller podocarp trees on the valley floor and strong regeneration of podocarps in the hill slope forest are notable features.
Other Criteria		
Size/shape	H	A moderate sized area with a good shape and well buffered.
Connectivity	H	An enclave within a larger area of indigenous forest.
Long-term Sustainability	M/H	Some plant and animal pest control may be required to maintain ecological values in the long term.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):

This area of forest has been protected by the present and previous owners, apart from some grazing on the valley-floor terraces. Hill slope forest within the area lies on steep slopes that have little potential for farm development.

Discussion:

This area easily meets the District Plan criteria for a Significant Natural Area. Important features of the area are the habitat it provides for forest birds; the presence of podocarp trees, including larger trees on the valley floor; the diversity of plant species; the presence of two locally uncommon plant species; and that the area is part of a larger area of forest.

Scientific names of species cited by common name in this report

(Note: this is not a complete species list; it is a list only of species cited by common name in this report)

Common Name	Scientific name
(* = naturalised species)	
ash*	<i>Fraxinus excelsior</i>
bidibid	<i>Acaena</i> sp.
blackberry*	<i>Rubus fruticosus</i>
broadleaf	<i>Griselinia littoralis</i>
burdock*	<i>Arctium minus</i>
bush lawyer	<i>Rubus cissoides</i>
bush lily	<i>Astelia fragrans</i>
buttercup	<i>Ranunculus hirtus</i>
Californian thistle*	<i>Cirsium arvense</i>
cardamine	<i>Cardamine debilis</i>
clematis	<i>Clematis paniculata</i>
common shield fern	<i>Polystichum richardii</i>
crack willow*	<i>Salix fragilis</i>
creeping buttercup*	<i>Ranunculus repens</i>
crown fern	<i>Blechnum discolor</i>
elderberry*	<i>Sambucus nigra</i>
five-finger	<i>Pseudopanax arboreus</i>
foxglove*	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
giant buttercup*	<i>Ranunculus acris</i>
gorse*	<i>Ulex europaeus</i>
hairy pennywort	<i>Hydrocotyle moschata</i>
hard fern	<i>Paesia scaberula</i>
hen and chickens fern	<i>Asplenium gracillimum</i>
Himalayan honeysuckle*	<i>Leycesteria formosa</i>
holly*	<i>Ilex aquifolium</i>
hookgrass	<i>Uncinia</i> sp.
horopito/pepperwood	<i>Pseudowintera colorata</i>
hound's tongue fern	<i>Microsorium pustulatum</i>
kahikatea/white pine	<i>Dacrycarpus dacrydioides</i>
kanuka	<i>Kunzea ericoides</i>
koromiko	<i>Hebe salicifolia</i>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
lawyer	<i>Rubus schmidelioides</i>
lemonwood	<i>Pittosporum eugenioides</i>
macrocarpa*	<i>Cupressus macrocarpa</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
manuka	<i>Leptospermum scoparium</i>
mapou	<i>Myrsine australis</i>
marbleleaf/putaputaweta	<i>Carpodetus serratus</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
mountain kiokio	<i>Blechnum montanum</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
native bindweed	<i>Calystegia tuguriorum</i>
native jasmine	<i>Parsonsia heterophylla</i>
necklace fern	<i>Asplenium flabellifolium</i>
nettle	<i>Urtica incisa</i>
pate	<i>Schefflera digitata</i>
pennywort	<i>Hydrocotyle novae-zelandiae</i>

poataniwha	<i>Melicope simplex</i>
pohuehue	<i>Muehlenbeckia australis</i>
prickly shield fern	<i>Polystichum vestitum</i>
rohutu	<i>Lophomyrtus obcordata</i>
supplejack	<i>Ripogonum scandens</i>
swamp kiokio	<i>Blechnum minus</i>
thousand-leaved fern	<i>Hypolepis millefolium</i>
totara	<i>Podocarpus totara</i>
velvety nightshade*	<i>Solanum chenopodioides</i>
wall lettuce*	<i>Mycelis muralis</i>
wineberry	<i>Aristolelia serrata</i>



The uncommon forest-floor herb, Australina pusilla

References Cited

Leathwick, J; Wilson, G; Rutledge, D; Wardle, P; Morgan, F; Johnston, K; McLeod, M; Kirkpatrick, R. 2003. *Land Environments of New Zealand*. David Bateman Ltd.

McEwen, WM (editor). 1987. Ecological regions and districts of New Zealand, third revised edition (Sheet 4). *New Zealand Biological Resources Centre Publication No. 5*. Department of Conservation, Wellington, 1987.