

**TIMARU DISTRICT**  
**SIGNIFICANT NATURAL AREAS**  
**SURVEY**

**DARREN MOORE PROPERTY**  
**(JOCK'S BLOCK)**



**Report prepared for the Timaru District Council by Mike Harding**  
**May 2009**

# TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

## PROPERTY REPORT

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### PROPERTY DETAILS:

**Owners:** ..... Darren Moore  
**Valuation Reference:** ..... 24670/020.05  
**Address:** ..... Stalker Road, Gapes Valley (PO Box 122, Winchester).  
**Location:** ..... On the lower eastern slopes of Waitohi Hill, near Gapes Valley.  
**Ecological Districts:** ..... Orari, but close to the Geraldine Ecological District.  
**TDC Land Type:** ..... Hard Rock Hills and Downs.  
**Land Environment:** ..... Q2 (Southeastern Hill Country).

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### ECOLOGICAL CONTEXT:

The property lies at the eastern (lower-altitude) boundary of the Orari Ecological District. The original vegetation of this area would have been predominantly podocarp-hardwood forest, possibly with areas of mountain beech forest. Dense podocarp-hardwood (matai-totara-kahikatea-lowland ribbonwood) forest would have occupied the lower hill country and the older terraces and flats. Kanuka forest or shrubland/scrub would have been present at recently disturbed sites, such as along the slips and streams. Wetland vegetation would have been present in poorly drained areas.

The indigenous fauna would have been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area. Long-tailed bats would also have been present.

More extensive areas of indigenous vegetation are present on nearby properties. The property lies close to the known range of the South Canterbury population of long-tailed bat, a nationally endangered species.

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### SIGNIFICANT AREAS ON THE PROPERTY:

One part of the property (SNA 72a) was surveyed in response to a resource consent application in 2005. Indigenous vegetation on the other low-altitude part of the property (SNA 72b) was surveyed as part of the District-wide survey of Significant Natural Areas in May 2009. Two areas are regarded as Significant Natural Areas (SNAs) when assessed against the District Plan criteria. These SNAs are listed in the table below.

Area No.	Area Name	Central grid reference	Aprox. size (ha)	Vegetation/habitat type
72a	Jock's Block west	J38: 584-768	1.68	Hardwood forest
72b	Jock's Block east	J38: 590-770	3.7	Hardwood forest; kanuka forest

These SNAs are illustrated on the attached aerial photograph and described in greater detail on the Area Inspection Forms in this report. Note that the boundaries of the SNAs are indicative, rather than precise. These areas meet the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and are considered to be sustainable in the long term (criterion vii, page B19), though will require some management such as animal control. SNAs are subject to confirmation by Council after regarding the matters listed under Final Considerations (pages B19-B20).

The implication of an area being listed as an SNA is that consent is required from Council for clearance of indigenous vegetation or habitat by any means (including burning and spraying with herbicides) or 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. It is expected that SNAs will eventually be listed in the District Plan by way of a plan change.

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**OTHER AREAS INSPECTED ON THE PROPERTY:**

Other areas of indigenous vegetation and habitat on the property were inspected from a distance. These comprise young regenerating indigenous scrub and smaller areas of low-stature hardwood forest, mostly along the main gullies. These areas have some value as indigenous vegetation and as habitat for birds, but do not meet the significance criteria in the Timaru District Plan. Failure of these areas to meet the significance criteria does not mean that they are not important for nature conservation or the protection of indigenous biodiversity; it simply means that the areas (as assessed at this time) do not meet the criteria in the Timaru District Plan.



Moore  
(Jock's Block)  
24670/020.05

Pirie Road

Top Road

Carrig Road

Bannock Road

Trig Road

72b

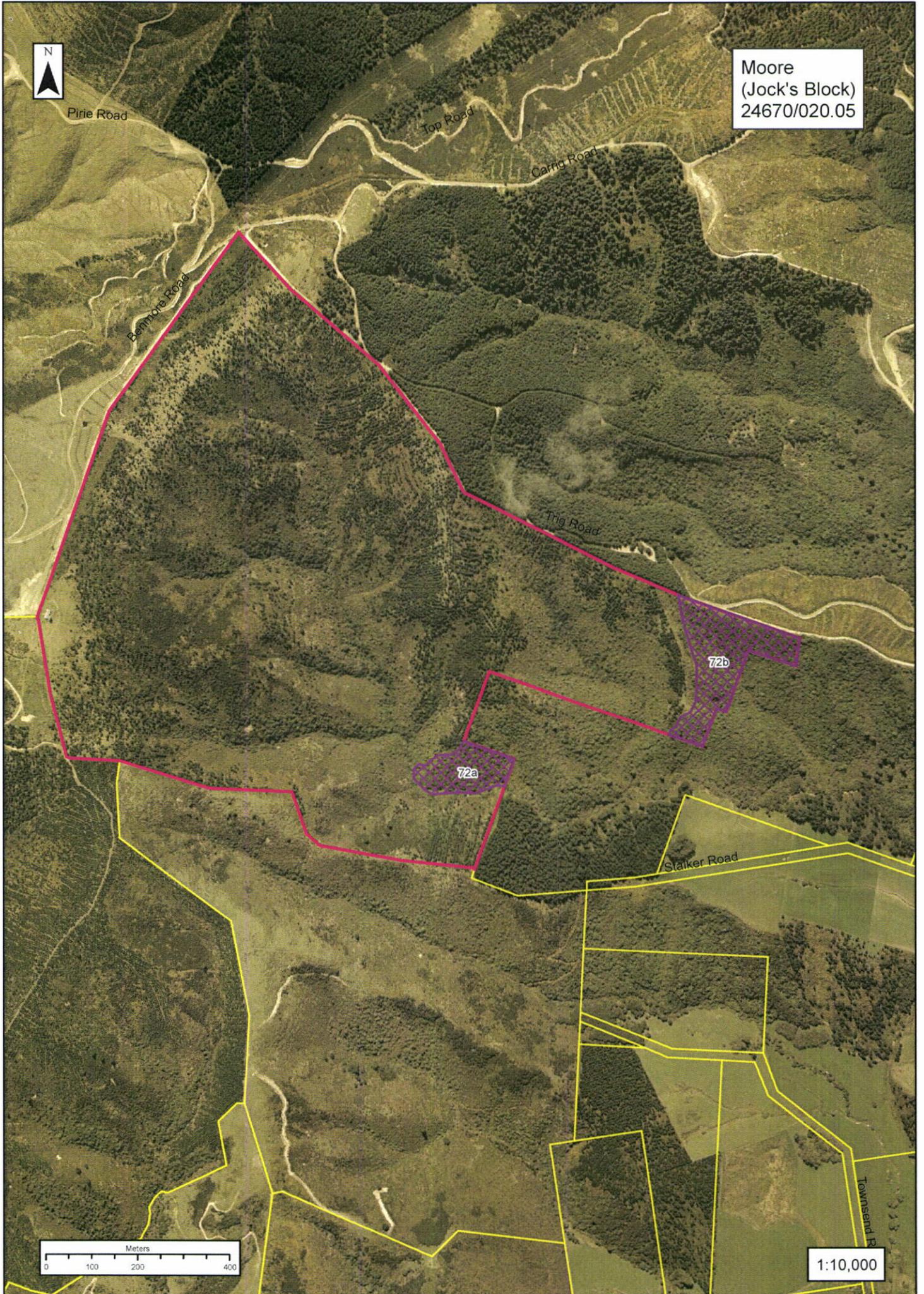
72a

Stalker Road

Townsend R



1:10,000



# TIMARU DISTRICT SNA SURVEY

AREA 72a

**Area Name:** Jock's Block West  
**Location (central map reference):** J38: 584-768  
**Ecological District:** Orari  
**Surveyors:** Mike Harding and Darren Moore

**Property:** Darren Moore  
**Nearest Locality:** Gapes Valley  
**Area Size (ha):** 1.68      **Altitude (m):** 400  
**Survey Time:** 2 hours      **Survey Date:** 18-05-05

## General Description:

This SNA lies on a moderately-steep south-facing slope and along the stream at the base of that slope, in the main gully southeast of Waitohi Hill (and northwest of the end of Stalker Road). The SNA is contiguous with an area of indigenous forest (Nelsons Bush Protective Covenant) east of the property (the remainder of Area 72).

## Plant Communities:

The main plant community present is hardwood forest. This plant community is described below. Naturalized (exotic) species are indicated with an asterisk\*.

The hardwood forest canopy is dominated by five finger, lemonwood, matipo, broadleaf and fuchsia. Other canopy and subcanopy species are pate, horopito, mahoe, mapou, wineberry, marbleleaf, kanuka, lancewood, bush lawyer, *Coprosma rotundifolia* and *Coprosma rhamnoides*. Less common woody species present are mountain ribbonwood, mountain akeake and a single matai (c. 6 m tall) beside the stream.

The forest floor is dominated by prickly shield fern and crown fern. Other ground-cover species present, especially along the stream, are bush lily, *Blechnum fluviatile*, *Blechnum chambersii*, *Blechnum procerum*, *Leptopteris hymenophylloides*, hanging spleenwort, hen and chickens fern and hound's tongue fern. Less commonly present are *Asplenium hookerianum*, kiokio, male fern\*, white climbing rata and a species of sedge (*Carex* sp.).

Regenerating hardwood forest of similar composition, though with more kanuka, continues as a narrow strip alongside the stream up the gullies beyond the Area to the west and northwest. Away from the stream the hardwood forest grades to scrub dominated by prickly shield fern, bracken, Himalayan honeysuckle\*, gorse\*, Spanish heath\* and crown fern, with scattered emergent native species (notably lemonwood, matipo, broadleaf, mountain akeake, koromiko, flax and lancewood).

## Notable Flora, Fauna and Habitats:

Important features of this area are the presence of three locally uncommon plant species (white climbing rata, crown fern and kiokio), the habitat the area provides for forest birds and the location of the area adjacent to a larger area of indigenous forest.

## Notable Plant and Animal Pests:

Himalayan honeysuckle, gorse and male fern are the main introduced species in the SNA. Spanish heath is present on adjoining slopes, and is particularly common on open north-facing slopes. These species do not pose a significant threat to the hardwood forest within the SNA. Feral pigs and possums appear to be the main wild animal species present. Cattle have also been present within the SNA recently (Darren Moore, *pers. comm.*). These animals, especially in high numbers, could have a significant impact on indigenous plants in the SNA.

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

The boundaries of the area are not fenced, though an old boundary fence is present within the SNA. The SNA is well buffered from nearby forestry and farming activities by dense scrub (with regenerating native species). The SNA is vulnerable to the relatively high populations of wild animals that appear to be present in the wider area.

## Condition and Management Issues:

The forest canopy in the SNA is in relatively good condition, indicating healthy regeneration of indigenous hardwood species over a period of at least 20 years and probably much longer. The forest understorey and

ground-cover is relatively open at present. Well-used animal tracks traverse the SNA, and palatable understorey species appear depleted.

**Property Owner Comment:**

The property owner has indicated a desire to retain indigenous forest in the Area and on the property generally.

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**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	<b>M</b>	A good example of indigenous vegetation typical of the ecological district.
Rarity	<b>M</b>	Contains populations of three locally-uncommon plant species (white climbing rata, crown fern and kiokio) and provides habitat for kereru/NZ pigeon.
Diversity and pattern	<b>M</b>	Species diversity is reduced from that originally present.
Distinctiveness/special features	<b>L/M</b>	The presence of a young matai tree is notable.
<b>Other Criteria</b>		
Size/shape	<b>M</b>	A small area, but with a good shape and well buffered.
Connectivity	<b>M/H</b>	Adjoins an area of covenanted forest along its main boundary.
Long-term Sustainability	<b>M</b>	Ongoing wild animal control will be required to maintain its ecological values in the long term.

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

The SNA is protected by its location on relatively steep rocky slopes in a gully and because access to the SNA for development is through adjoining properties (including an area protected by covenant).

**Discussion:**

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of three locally uncommon plant species (white climbing rata, crown fern and kiokio), the habitat the area provides for forest birds and the location of the area adjacent to a larger area of indigenous forest.

# TIMARU DISTRICT SNA SURVEY

AREA 72b

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<b>Area Name:</b> Jock's Block East	<b>Property:</b> Darren Moore	
<b>Location (central map reference):</b> J38: 590-770	<b>Nearest Locality:</b> Gapes Valley	
<b>Ecological District:</b> Orari	<b>Area Size (ha):</b> 3.7	<b>Altitude (m):</b> 350-440
<b>Surveyors:</b> Mike Harding	<b>Survey Time:</b> 1 hour	<b>Survey Date:</b> 17-04-09

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## General Description:

This SNA lies on moderately-steep south-facing slopes on the lower eastern flank of Waitohi Hill. It is part of a larger area of indigenous forest (some of which is protected) that lies mostly on an adjoining property.

## Plant Communities:

Two main plant communities are present: kanuka-dominated forest on the drier upper slopes and mixed hardwood forest in the main gully. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

### Dry-slope forest:

This plant community occupies the upper slopes and ridge crest at the northeast part of the SNA. The forest canopy is dominated by kanuka, five-finger, lemonwood, marbleleaf, mahoe and bush lawyer. Other canopy species present are broadleaf and fuchsia.

The forest here has a very open understorey and ground cover. Understorey species present are *Coprosma rhamnoides*, *Coprosma rotundifolia*, mahoe, lancewood, mapou, lemonwood, horopito and matipo.

Ground-cover species commonly present are crown fern and *Blechnum fluviatile*. Other ground-cover species present are hard fern, mountain kiokio, *Blechnum procerum*, hen and chickens fern, hound's tongue fern, *Leptopteris hymenophylloides*, hookgrass and seedlings of pate, supplejack and koromiko.

### Gully forest:

Forest in the main gully is dominated by fuchsia. Other canopy species in the gully and on the adjoining slopes are mahoe, lemonwood, broadleaf, kanuka, five-finger, pate, matipo, marbleleaf, bush lawyer and pohuehue.

Species present in the open understorey are mahoe, mapou, *Coprosma rotundifolia*, *Coprosma rhamnoides*, matipo, lemonwood, pate, lancewood, horopito and native jasmine.

Ground-cover species present are prickly shield fern, mountain kiokio, *Blechnum fluviatile*, hen and chickens fern, hound's tongue fern, *Asplenium hookerianum*, *Carex forsteri*, bush lily and pohuehue.

Additional species present at the forest margin or in forest openings are *Coprosma propinqua*, gorse\*, Himalayan honeysuckle\*, bracken and *Hypolepis ambigua*.

## Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird and fantail.

## Notable Flora, Fauna and Habitats:

Important features of this area are its location adjacent to larger areas of indigenous vegetation, the presence of two locally uncommon plant species (crown fern and supplejack) and the contribution the area makes to fauna habitat in the wider area.

## Notable Plant and Animal Pests:

Gorse and Himalayan honeysuckle are present at the forest margins and in forest openings, though neither of these species poses a significant threat to the forest. Animal pests were not surveyed, though pig sign was common, including widespread disturbance to the forest floor.

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

This SNA is well buffered by its location on a moderately-steep south-facing slope and by the surrounding vegetation. The forest adjoins other indigenous forest or pine plantations on its boundaries. It forms part of a network of forest bird habitat on the slopes of Waitohi Hill.

**Condition and Management Issues:**

The forest canopy is in relatively good condition. However, the forest understorey and ground-cover are quite open. The most important management issue is control of populations of wild animals.

**Property Owner Comment:**

Darren Moore has indicated an interest in retaining existing areas of indigenous vegetation on the property.

**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	<b>M</b>	A good example of young forest typical of the ecological district.
Rarity	<b>M</b>	Contains populations of two locally-uncommon plant species (crown fern and supplejack) and is likely to provide habitat for kereru/NZ pigeon.
Diversity and pattern	<b>M</b>	Two main plant communities are present, though species diversity is much reduced from that originally present.
Distinctiveness/special features	<b>L</b>	
<b>Other Criteria</b>		
Size/shape	<b>M</b>	A small area but well buffered.
Connectivity	<b>M/H</b>	Adjoins an area of covenanted forest along one boundary.
Long-term Sustainability	<b>M</b>	Continued wild animal control will be required to maintain the ecological values of the area in the long term.

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

This area of forest has been informally protected by the landowner. Its location and the steepness of the slopes limit its potential for farm development.

**Discussion:**

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are its location adjacent to larger areas of indigenous vegetation, the presence of two locally uncommon plant species (crown fern and supplejack) and the contribution the area makes to fauna habitat in the wider area.

### 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)	
bracken .....	<i>Pteridium esculentum</i>
broadleaf .....	<i>Griselinia littoralis</i>
bush lawyer .....	<i>Rubus cissoides</i>
bush lily .....	<i>Astelia</i> sp.
crown fern .....	<i>Blechnum discolor</i>
five-finger .....	<i>Pseudopanax arboreus</i>
flax .....	<i>Phormium tenax</i>
fuchsia .....	<i>Fuchsia excorticata</i>
gorse* .....	<i>Ulex europaeus</i>
hanging spleenwort .....	<i>Asplenium flaccidum</i>
hard fern .....	<i>Paesia scaberula</i>
hen and chickens fern .....	<i>Asplenium bulbiferum</i>
Himalayan honeysuckle* .....	<i>Leycesteria formosa</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>
kiokio .....	<i>Blechnum novae-zelandiae</i>
koromiko .....	<i>Hebe salicifolia</i>
kowhai .....	<i>Sophora microphylla</i>
lancewood .....	<i>Pseudopanax crassifolius</i>
lemonwood .....	<i>Pittosporum eugenioides</i>
lowland ribbonwood .....	<i>Plagianthus regius</i>
mahoe/whiteywood .....	<i>Meliccytus ramiflorus</i>
male fern* .....	<i>Dryopteris filix-mas</i>
mapou .....	<i>Myrsine australis</i>
marbleleaf/putaputaweta .....	<i>Carpodetus serratus</i>
matai/black pine .....	<i>Prumnopitys taxifolia</i>
matipo/kohuhu .....	<i>Pittosporum tenuifolium</i>
mountain akeake .....	<i>Olearia avicenniifolia</i>
mountain kiokio .....	<i>Blechnum montanum</i>
mountain ribbonwood .....	<i>Hoheria lyallii</i>
native jasmine .....	<i>Parsonsia</i> sp.
pate .....	<i>Schefflera digitata</i>
pohuehue .....	<i>Muehlenbeckia australis</i>
prickly shield fern .....	<i>Polystichum vestitum</i>
Spanish heath* .....	<i>Erica lusitanica</i>
supplejack .....	<i>Ripogonum scandens</i>
totara .....	<i>Podocarpus totara</i>
white climbing rata .....	<i>Metrosideros diffusa</i>
wineberry .....	<i>Aristotelia serrata</i>