

Key to the plants of the track from Pigeon Flat to Leith Saddle

This key is designed to help identify those vascular plants, excluding ferns, which can readily be seen from the path leading from Waitati Valley Road near its intersection with State Highway One at Pigeon Flat, to the trig station at the summit of Swampy Spur on Leith Saddle.

Key to sections:

Ferns: ... see separate "Key to the ferns of Dunedin".

Angiosperms (flowering plants), gymnosperms (conifers) and fern allies (clubmosses):

Climber or trailer: **p. 1 A**

Plant more or less upright or creeping: ...

Shrubs and trees, excluding tree ferns ... **p. 2 B**

Grasses or similar monocots with simple leaves at least eight times as long as wide **p. 4 C**

Grasses (straight, or inverted V-shaped, ligule present) **p. 4**

Without a ligule, or ligule V-shaped other monocots: **p. 4**

Dicot. herb or low shrub ... **p. 6 D**

Herb or low shrub; leaves simple and borne on stems ... **p. 6**

Herb, leaves simple and less than eight times as long as wide ... **p. 8 E**

Herb, leaves compound **p. 8 F**

A. CLIMBERS AND TRAILERS

- | | |
|---|--------------------------------|
| 1. Leaves compound or deeply lobed | 2 |
| 2. Stems prickly | 3 |
| 3. Stem round in cross-section | <i>Rubus cissoides</i> |
| 3. Stem square in cross-section | <i>Rubus fruticosus*</i> |
| 2. Stems not prickly | 4 |
| 4. Leaves compound, with three leaflets (much lobed in juvenile) | <i>Clematis paniculata</i> |
| 4. Leaves/leaflets simple | 5 |
| 5. Leaves deeply lobed (pinnatifid) and variable [a fern] | <i>Microsorium pustulatum</i> |
| 5. Leaflets entire (actually simple leaves) | <i>Metrosideros diffusa</i> |
| 1. Leaves simple | 6 |
| 6. Leaves opposite | 7 |
| 7. Leaves almost sessile | <i>Metrosideros diffusa</i> |
| 7. Leaves with substantial petioles ... | 8 |
| 8. Leaves similar, ± three times as long as wide | <i>Clematis paniculata</i> |
| 8. Leaves variable, > five times as long as wide | <i>Parsonsia heterophylla</i> |
| 6. Leaves alternate | 9 |
| 9. Leaf veins meet at tip | <i>Ripogonum scandens</i> |
| 9. Leaf veins diverge | <i>Muehlenbeckia australis</i> |

B. SHRUBS AND TREES (excluding tree ferns)

10. Leaves absent (spines only)	11
11. Branches terminating in a stout spine; bark of younger shoots whitish	<i>Melicytus alpinus</i>
11. Spiny throughout; bark of younger shoots greenish	<i>Ulex europaeus*</i>
10. Leaves present	12
12. Leaves joined to the stem in opposite pairs	13
13. Stipules present and fused across the node	14
14. Leaves of different shapes; some oval, some strap-shaped	<i>Coprosma rhamnoides</i>
14. Leaves all the same shape	15
15. Leaves more or less round	16
16. Leaves dull-green below	<i>Coprosma rotundifolia</i>
16. Leaves white or nearly so below	<i>Coprosma crassifolia</i>
15. Leaves much longer than wide	17
17. Leaves more than 25mm long, obovate	<i>Coprosma foetidissima</i>
17. Leaves less than 25 mm long with parallel sides	18
18. Stipules fused to form a long tube round the stem	<i>Coprosma linariifolia</i>
18. Stipules short	19
19. Leaves strap-shaped, curved; bark orange	<i>Coprosma rugosa</i>
19. Leaves small, boat-shaped, straight; bark grey	<i>Coprosma propinqua</i>
13. Stipules absent or, if present, not fused across the node	20
20. Leaf edge markedly toothed	<i>Aristotelia serrata</i>
20. Leaf edge entire (may be very finely toothed, ciliate or hairy)	21
21. Leaves linear, apex acute	<i>Veronica salicifolia</i>
21. Leaves round to oval, or ovate; apex acute or obtuse	22
22. Apex acute, stems hollow	<i>Leycesteria formosa*</i>
22. Apex obtuse, stems solid	23
23. Leaves boat-shaped, green throughout	<i>Veronica odora</i>
23. Leaves flat with black spot at base of lamina	<i>Neomyrtus pedunculata</i>
12. Leaves joined to the stem singly	24
24. Leaves simple	25
25. Leaf narrower than 5 mm	26
26. Leaves more-or-less in two rows, each side of the stem	<i>Prumnopitys ferruginea</i>
26. Leaves all round the stem	27
27. Leaf longer than 12 mm	28
28. Plant a tree or shrub	29
29. Tree or shrub	<i>Podocarpus hallii</i>
29. Shrub	30
30. Leaf longer than 50 mm	<i>Dracophyllum longifolium</i>
30. Leaf shorter than 50 mm	<i>Dracophyllum uniflorum</i>
28. Plant herbaceous, upper leaves < 12mm	<i>Huperzia varia</i>
27. Leaf shorter than 12 mm	33
33. Spike on end of leaf	34
34. Flowers solitary	<i>Leptospermum scoparium</i>
34. Flowers in small cymes	<i>Kunzea ericoides</i>
33. Without spike	35
35. Tree	36
36. Tree conical in shape	<i>Libocedrus bidwillii</i>
36. Tree rounded in shape	<i>Dacrydium cupressinum</i>
35. Shrub	<i>Ozothamnus leptophyllus</i>
25. Leaf broader than 5 mm	page 3

25. Leaf broader than 5 mm	37
37. Leaf edge spinose (<i>i.e.</i> , having sharp spines)	38
38. Yellowish-white tomentum below	<i>Olearia ilicifolia</i>
38. Glabrous below	<i>Ilex aquifolium</i> *
37. Leaf edge otherwise toothed, or entire	39
39. Leaf-edge toothed (even faintly)	40
40. Young leaf-stalks pink; bark orange	<i>Fuchsia excorticata</i>
40. Young leaf-stalks green or brown; bark brown or grey	41
41. Leaves twice, or more, as long as wide	42
42. Leaf petiole half as long as blade or longer	<i>Raukawa simplex</i>
42. Leaf stalk less than half as long as leaf-blade	43
43. Leaves sub-membranous	<i>Melicytus ramiflorus</i>
43. Leaves coriaceous	44
44. Leaves variably-shaped, orbicular to deeply cut, narrow, linear ...	<i>Elaeocarpus hookerianus</i> (juvenile)
44. Leaves lanceolate to narrow-oblong	45
45. Main vein below, reddish; tree conical	<i>Elaeocarpus hookerianus</i> (adult)
45. Main vein below, brown or yellow/greenish	46
46. All, or lower, leaves > 8x longer than wide..	<i>Pseudopanax crassifolius</i> (juvenile)
46. All, or upper, leaves < 5x longer than wide; tree round-headed	<i>Pseudopanax crassifolius</i> (adult)
41. Leaves 1 to 1½ times as long as wide	47
47. Leaf mottled above	<i>Carpodetus serratus</i>
47. Leaf uniform green	<i>Gaultheria antipoda</i>
39. Leaf-edge entire (perhaps wavy)	48
48. Leaf white below	49
49. Leaf upper surface blotched wine-red	<i>Pseudowintera colorata</i>
49. Leaf upper surface uniformly green	50
50. Leaves twice, or more, as long as wide	<i>Fuchsia excorticata</i>
50. Leaves 1 to 1½ times as long as wide	51
51. Edges with a few widely-spaced, small, broadly-based teeth	<i>Olearia arborescens</i>
51. Edges entire	<i>Olearia avicenniaefolia</i>
48. Leaf green or yellowish below	52
52. Oldest leaves shorter than 60 mm	53
53. Youngest twigs and lower midrib bright red	<i>Myrsine australis</i>
53. Youngest twigs and lower midrib otherwise coloured	54
54. Leaves longer than 15 mm	<i>Pittosporum tenuifolium</i>
54. Leaves shorter than 15 mm	55
55. Leaves gland-dotted	<i>Myrsine divaricata</i>
55. Leaves without glands	<i>Ozothamnus leptophyllus</i>
52. Oldest leaves longer than 60 mm	56
56. Leaf-edge wavy	<i>Pittosporum eugenioides</i>
56. Leaf-edge flat	57
57. Leaf < 10 cm oval to almost round	58
58. Leaf > 2cm	<i>Griselinia littoralis</i>
58. Leaf < 2cm	<i>Metrosideros diffusa</i>
57. Leaf longer than 10 cm and narrow	<i>Cordyline australis</i>
24. Leaves compound	page 4
	59

24. Leaves compound	59
59. Leaflets lobed	<i>Raukawa simplex</i> (juvenile)
59. Leaflets toothed, but not lobed	60
60. Leaflets sessile, or nearly so	<i>Pseudopanax colensoi</i>
60. Leaflets stalked	61
61. Leaflets finely toothed	<i>Schefflera digitata</i>
61. Leaflets with large teeth	<i>Raukawa simplex</i> (older juvenile)
<u>C. GRASSES OR SIMILAR MONOCOTS WITH SIMPLE LEAVES ARISING FROM THE GROUND AND AT LEAST EIGHT TIMES AS LONG AS WIDE</u>	
62. A grass (straight ligule, may appear as an inverted V)	63
63. Softly hairy all over	64
64. Red stripes down the base of the leaf sheath; ligule without hairs	<i>Holcus lanatus</i> *
64. Not striped; hairs at side of ligule	<i>Anthoxanthum odoratum</i> *
63. Glabrous	65
65. Ligule with hairs	66
66. Ligule a row of hairs	67
67. Oldest leaf 1-2mm wide	<i>Rytidosperma gracile</i>
67. Oldest leaf 2-7 mm wide	<i>Chionochloa rigida</i>
66. Ligule a flap with hairs round it	68
68. Leaf narrower than 3mm	<i>Anthoxanthum odoratum</i> *
68. Leaf broader than 6mm	<i>Microlaena avenacea</i>
65. Ligule a flap without hairs	69
69. Leaves about 1 mm wide and needle-like	70
70. Leaf sheath straw-coloured; glabrous	<i>Poa colensoi</i>
70. Leaf sheath red-brown; hairs often retrorse	<i>Festuca rubra</i>
69. Leaves wider than 1 mm and blade flattened	71
71. Youngest leaf rolled in shoot (sheaths appear rounded)	72
72. Ligule shorter than 1mm	73
73. Leaf without auricles	<i>Agrostis capillaris</i> *
73. Leaf with hairy auricles	<i>Schedonorus arundinacea</i>
72. Ligule longer than 2 mm	<i>Hierochloë redolens</i>
71. Youngest leaf folded in shoot (sheaths appear flat)	74
74. Ligule shorter than 1mm; blade widest in middle; dark green	<i>Microlaena avenacea</i>
74. Ligule longer than 2mm; sides of blade parallel; pale green	<i>Dactylis glomerata</i> *
62. Not a grass (no ligule or ligule V-shaped)	75
75. Leaf broader than 20 mm	76
76. Leaves ridged (M or W in cross-section)	77
77. One large costa each side of midrib and wider than it	<i>Astelia fragrans</i>
77. Leaf lamina without any single conspicuous costa on each side of midrib	<i>Astelia nervosa</i>
76. Leaves V shaped in cross-section	78
78. Seed pods pointing upwards, trigonous, valves not twisted; leaf bases brightly coloured	<i>Phormium tenax</i>
78. Seed pods pointing downwards, terete, valves twisted; leaf bases usually pale in colour	<i>Phormium cookianum</i>
75. Leaf narrower than 20mm	79
79. Leaves white below [not a monocot.]	<i>Celmisia gracilentia</i>
79. Leaves greenish or yellowish below	80
80. Leaf fleshy, at least at base page 5	81

80. Leaf fleshy, at least at base	81
81. Several leaves, spirally arranged at base, shallowly channelled and without a keel ...	<i>Bulbinella angustifolia</i>
81. Solitary leaf, deeply channelled and keeled ...	<i>Thelymitra cyanea</i>
80. Leaf not fleshy	82
82. Leaf rounded in cross-section	83
83. Leaves arranged like a comb ...	<i>Oreobolus pectinatus</i>
83. Leaves not so arranged	84
84. 'Leaf' longer than 100 mm ...	<i>Juncus gregiflorus</i>
84. Leaf shorter than 100 mm ...	<i>Oreobolus strictus</i>
82. Leaves flat or V-shaped in cross-section	85
85. Leaves hairy [not a monocot.] ...	<i>Hypochaeris radicata*</i>
85. Leaves glabrous	86
86. Leaf edges rough	87
87. Leaf wider than 10mm	88
88. Leaves flexible; plant rhizomatous; tillers loose ...	<i>Carex coriacea</i>
88. Leaves stiff; plant a tussock; tillers fan-shaped ...	<i>Libertia ixioides</i>
87. Leaf narrower than 10mm	89
89. Leaf less than 0.5 mm wide ...	<i>Uncinia filiformis</i>
89. Leaf wider than 1mm	90
90. Culms <0.5 mm wide; basal bracts light brown ...	<i>Uncinia zotovii</i>
90. Culms 1 – 1.5 mm wide; basal bracts dull brown	<i>Uncinia uncinata</i>
86. Leaf edges smooth	91
91. Epiphyte ...	<i>Earina autumnalis</i>
91. Terrestrial	92
92. Erect tufts; leaves < 3mm wide ...	<i>Juncus tenuis*</i>
92. Plants single; leaves > 3mm wide ...	<i>Pterostylis banksii</i>

D. HERB OR LOW SHRUB; LEAVES SIMPLE AND BORNE ON STEMS.

93. Leaves joined to the stem in opposite pairs	94
94. Leaves in two regular rows, scale-like with smaller scales between	<i>Lycopodium scariosum</i>
94. Leaves other than in two rows	95
95. Stems woody, at least right at base	96
96. White, silky hairs on leaf tip	<i>Pimelea oreophila</i>
96. Leaves glabrous	<i>Coprosma cheesemanii</i>
95. Stems herbaceous	97
97. Leaves toothed or lobed, glabrous	98
98. Abundantly toothed or very deeply lobed	<i>Euphrasia zelandica</i>
98. Few, small, pointed teeth	<i>Gonocarpus micranthus</i>
97. Leaves entire and possibly hairy	99
99. Stipules present between opposite leaves	100
100. Leaf-blade gradually narrows to base	<i>Nertera perpusilla</i>
100. Distinct petiole present	<i>Nertera patrickii</i>
99. Opposite leaves without stipules	101
101. Leaves and stems red below	<i>Epilobium</i> sp.
101. Leaves and stems otherwise coloured	102
102. Leaf about 1mm wide	<i>Scleranthus biflorus</i>
102. Leaf wider than 3mm	103
103. Sparsely hairy	<i>Gentianella grisebachii</i>
103. Abundantly hairy	<i>Cerastium fontanum</i> *
93. Leaves joined to the stem singly	104
104. Leaves toothed or lobed	105
105. Leaves toothed, but not lobed	106
106. Leaf narrower than 4 mm	<i>Gaultheria macrostigma</i>
106. Leaf wider than 4mm	107
107. Leaf longer than 10 mm	<i>Hieracium lepidulum</i> *
107. Leaf shorter than 10 mm	<i>Gaultheria depressa</i>
105. Leaves deeply lobed	<i>Geranium microphyllum</i>
104. Leaves entire	108
108. Leaves white or pale, even pinkish, underneath	109
109. Leaves wider than 15 mm	<i>Hieracium lepidulum</i> *
109. Leaves narrower than 15 mm	110
110. Leaf wider than 2 mm	111
111. Leaf bases with papery ochrea	<i>Rumex acetosella</i> *
111. Leaf bases without an ochrea or stipule of any kind	112
112. Seed-head daisy-like with white "petals"; leaves spirally arranged; stems branched	<i>Anaphylloides bellidioides</i>
112. Seed-head without "petals"; leaves in opposite pairs; unbranched	<i>Helichrysum filicaule</i>
110. Leaf narrower than 1 mm	111
111. Leaf margins entire, thickened towards base	<i>Cyathodes pumila</i>
111. Leaf margins ciliolate, recurved	<i>Androstoma empetrifolia</i>
108. Leaves otherwise coloured underneath	114
114. Leaves longer than 20 mm	115
115. Only two leaves per plant	<i>Aporostylis bifolia</i>
115. More than two leaves per plant	116
116. A grass	<i>Agrostis capillaris</i> *
116. A dicotyledonous herb	<i>Rumex acetosella</i> *
114. Leaves shorter than 20 mm	117
117. Leaf pear-shaped, oval, oblong, lanceolate or elliptic	118
118. Leaves spaced along stem	

118. Leaves spaced along stem	119
119. Faint parallel lines underneath	120
120. Obvious spike on leaf tip; plants green-brown ...	<i>Leucopogon fraseri</i>
120. Leaf pointed, but without spike; plants green-purple	<i>Pentachondra pumila</i>
119. Leaves uniformly green below	<i>Rumex acetosella*</i>
118. Leaves crowded in a rosette at the end of the stem; no lines below, except midrib	<i>Raoulia subsericea</i>
117. Leaf needle-shaped	121
121. Leaves narrower than 1 mm	122
122. Regular dichotomous branching	<i>Lycopodium fastigiatum</i>
122. Irregular branching	123
123. Leaves alternate	<i>Kelleria dieffenbachia</i>
123. Leaves in whorls of four	<i>Erica vagans*</i>
121. Leaves broader than 1 mm	<i>Tmesipteris tannensis</i>

E. HERB OR LOW SHRUB; LEAVES SIMPLE, ARISING FROM GROUND AND LESS THAN EIGHT TIMES AS LONG AS WIDE.

124. Leaves with hairs	125
125. Leaves with obvious teeth or lobes	126
126. Leaf more than twice as long as wide	<i>Hypochaeris radicata*</i>
126. Leaf about as long as wide	127
127. Leaves downy	<i>Ranunculus multiscapus</i>
127. Leaves sparsely hairy	<i>Gunnera monoica</i>
125. Leaves entire	128
128. Leaf petiole distinct	129
129. Black dots on leaf-edge	<i>Brachyglottis bellidioides</i>
129. Leaves green throughout	<i>Dichondra brevifolia</i>
128. Leaf petiole indistinct, leaf-blade narrowing gradually to base	130
130. Long hairs (>2mm) on top of leaf-blade	<i>Hieracium pilosella*</i>
130. Hairs on leaf-blade minute	<i>Craspedia uniflora</i>
124. Leaves glabrous	131
131. Distinct leaf-stalk	<i>Viola cunninghamii</i>
131. Leaf narrows gradually to base	132
132. Leaves deeply lobed; lobes sharply acute	<i>Lactuca muralis*</i>
132. Leaves entire; parallel sides	133
133. Leaves white below	<i>Celmisia gracilentia</i>
133. Leaves green below	<i>Thelymitra cyanea</i>

F. HERB OR LOW SHRUB; LEAVES COMPOUND

134. Leaf very stiff (tip will draw blood)	135
135. Golden-green; leaves mostly once divided	<i>Aciphylla aurea</i>
135. Bluish-green; leaves twice divided	<i>Aciphylla glaucescens</i>
134. Leaf not stiff	136
136. Leaves with three leaflets	137
137. Leaves palmate	138
138. Leaf hairy	<i>Ranunculus multiscapus</i>
138. Leaf glabrous	<i>Trifolium repens*</i>
137. Leaves pinnate	<i>Cardamine debilis</i>
136. Leaves with five or more leaflets	139
139. Leaves arising from the ground in rosettes	140
140. Leaflets with many, pointed lobes	<i>Anisotome aromatica</i>
140. Leaflets without lobes or lobes very slightly rounded	<i>Cardamine debilis</i>
139. Leaves arising from creeping, stoloniferous stems	<i>Acaena anserinifolia</i>