

HAMAMA–KOTINGA HIGH TERRACES ECOSYSTEM NATIVE PLANT RESTORATION LIST

Locality:	Two high terrace systems and minor fans centred on Hamama and Kotinga between Takaka River in the east, and Go-Ahead Creek in the west, and bounded in the south by the northern ends of the Anatoki and Lockett Ranges.
Topography:	Extensive terraces forming high plains gently dipping to the north-east, between 20-80m altitude although extending inland to 180m on fans below the Anatoki Range. Scattered doline depressions towards the southern end of the terraces, most of which are permanent lakelets. Almost total absence of water courses.
Soils and Geology:	Stony silt loams of moderate to moderately low fertility derived from a range of sedimentary rocks, marble, granites, schist and quartzite. Soils overlying slightly weathered glacial outwash gravels, and marble where dolines are evident. No iron pan. Well-drained and moderately drought-prone.
Climate:	High sunshine hours; frosts moderate; mild annual temperatures. Rainfall 2400-2800mm.
Coastal Influence:	None.
Original Vegetation:	Mixed podocarp-beech-broadleaf forest, especially tōtara, mataī, black beech, tītoki and northern rātā. Wetland vegetation associated with dolines, especially kuta.
Human Modification:	No original vegetation remaining. Several scattered copses of secondary forest persist, most east of Hamama, also scattered individual trees, mainly tōtara.

[Refer to the Ecosystem Restoration map showing the colour-coded area covered by this list.]

KEY

PLANTING RATIO	PLANT PREFERENCES	TYPE OF FOOD PROVIDED FOR BIRDS AND LIZARDS
<p>Early Stage plants are able to establish in open sites and can act as a nursery for later stage plants by providing initial cover.</p> <p>Later Stage plants need cover to establish.</p> <p>2 = plant commonly 1 = plant less commonly 0 = not suitable to plant at this stage</p>	<p>Wet, Moist, Dry, Sun, Shade, Frost</p> <p>1 = prefers or tolerates ½ = prefers or tolerates some 0 = intolerant of</p> <p>Plant in habitat type:</p> <p>W = freshwater wetlands (dolines)</p>	<p>F = Fruit/seeds N = Nectar B = Buds/foilage I = Insects</p>

PLANT SPECIES FOR HAMAMA–KOTINGA HIGH TERRACES ECOSYSTEM		EARLY STAGE PLANTING RATIO	LATER STAGE PLANTING RATIO	PLANT PREFERENCES							Maximum Height (metres)	Food Type
Botanical Names	Māori & Common Names			Wet	Moist	Dry	Sun	Shade	Frost	Freshwater Wetland Only		
TREES												
<i>Alectryon excelsus</i>	tītoki	0	2	0	1	1	0	1	0		15	FI
<i>Aristotelia serrata</i>	makomako, wineberry	1	2	½	1	0	0	1	½		10	FBI
<i>Beilschmiedia tawa</i>	tawa	0	1	0	1	0	0	1	0		20	FI
<i>Carpodetus serratus</i>	putaputāwētā, marbleleaf	1	1	1	1	0	1	½	1		10	FBI
<i>Coprosma areolata</i>	thin-leaved coprosma	1	2	0	1	½	½	½	½		5	FBI
<i>Coprosma crassifolia</i>	thick-leaved coprosma	1	0	0	½	1	1	½	1		5	FB
<i>Coprosma grandifolia</i>	raurekau	0	2	½	1	0	½	1	½		6	FB
<i>Coprosma linariifolia</i>	yellow-wood	1	1	0	1	½	1	1	½		6	F

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Botanical Names	Māori & Common Names			Wet	Moist	Dry	Sun	Shade	Frost	Freshwater Wetland Only		
Coprosma lucida	shining karamū	2	1	0	1	1	1	½	½		6	F
Coprosma robusta	karamū	2	1	½	1	1	1	½	½		6	F
Coprosma rotundifolia	hairy coprosma	1	1	½	1	0	½	1	1		5	FB
Cordyline australis	tī kouka, cabbage tree	2	0	1	1	1	1	0	1		12	FNI
Coriaria arborea	tree tutu	2	0	½	1	1	1	0	½		6	F
Cyathea dealbata	ponga, silver fern	0	2	0	1	½	0	1	½		10	I
Dacrycarpus dacrydioides	kāhikatea	1	2	1	1	0	½	½	1	W	60	FI
Dacrydium cupressinum	rimu	1	1	1	1	½	½	½	1		35	FI
Dicksonia squarrosa	whekī	0	1	½	1	0	0	1	1		7	I
Dodonaea viscosa	akeake	2	0	0	1	1	1	0	½		7	I
Elaeocarpus dentatus	hīnau	0	2	½	1	0	½	1	½		18	FNBI
Elaeocarpus hookerianus	pōkākā	1	1	1	1	0	½	½	1		12	FI
Fuchsia excorticata	kōtukutuku, tree fuchsia	0	1	½	1	0	½	1	½		10	FNBI
Griselinia littoralis	papauma, broadleaf	1	1	0	1	1	1	1	1		12	FBI
Griselinia lucida	puka	1	1	0	1	1	1	½	0		8	FBI
Hedycarya arborea	porokaiwhiri, pigeonwood	0	2	0	1	1	1	½	½		8	FBI
Hoheria ovata	limestone lacebark	1	0	½	1	1	1	½	1		10	FI
Kunzea ericoides	kānuka	2	0	0	½	1	1	0	1		15	NI
Laurelia novae-zelandiae	pukatea	0	1	1	½	0	0	1	½	W	35	BI
Leptospermum scoparium	mānuka	2	0	1	1	1	1	0	1		8	NI
Lophomyrtus obcordata	rōhutu	2	1	½	1	1	1	1	½		8	FI
Macropiper excelsum	kawakawa, pepperwood	0	2	½	1	1	1	1	0		6	FI
Melicope simplex	poataniwha	1	1	0	1	1	1	1	½		5	
Melicytus ramiflorus	māhoe, whiteywood	0	2	½	1	1	½	1	½		10	FBI
Metrosideros robusta	northern rātā	1	1	½	1	½	½	0	½		30	N
Myoporum laetum	ngaio	1	0	0	1	1	1	0	0		10	FN
Myrsine australis	māpou	2	1	0	1	1	1	½	1		8	FI
Myrsine divaricata	weeping māpou	1	1	1	1	1	½	1	1		4	F
Myrsine salicina	toro	1	2	½	1	0	½	1	1		8	F
Neomyrtus pedunculata	rōhutu	1	1	1	1	0	½	1	1		6	F
Nothofagus menziesii	silver beech	1	1	1	1	1	½	½	1		30	F
Nothofagus solandri var. solandri	black beech	2	2	0	1	1	1	½	1		25	FNI
Olearia rani	heketara	0	1	0	1	1	½	½	½		7	I
Pennantia corymbosa	kaikōmako	2	2	1	1	1	1	1	1		12	FNBI
Phyllocladus trichomanoides	tānekaha	1	1	0	1	1	1	½	½		20	I
Pittosporum eugenioides	tarata, lemonwood	2	1	½	1	1	1	½	1		12	FI
Pittosporum tenuifolium	kōhūhū	2	1	0	1	1	1	½	1		9	FBI
Podocarpus totara	tōtara	2	2	0	1	1	1	½	1		30	FBI
Prumnopitys ferruginea	miro	0	1	½	1	0	½	½	1		25	FI
Prumnopitys taxifolia	mataī	2	2	0	1	1	1	½	1		25	FI
Pseudopanax arboreus	orihou, five finger	1	1	0	1	½	½	½	½		8	FNBI
Pseudopanax crassifolius	horoeka, lancewood	2	2	½	1	1	1	1	1		10	FNI
Pseudowintera axillaris	lowland horopito	0	1	½	1	0	0	1	½		7	F
Rhopalostylis sapida	nīkau	0	1	½	1	0	0	1	0		10	FNI
Streblus heterophyllus	milkwood	1	1	0	1	1	½	½	½		10	FB
Weinmannia racemosa	kāmahi	1	1	½	1	½	½	½	1		10	NI

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Botanical Names	Māori & Common Names			Wet	Moist	Dry	Sun	Shade	Frost	Freshwater Wetland Only		
SHRUBS												
Carmichaelia australis var. "flagelliformis"	whip broom	2	1	½	1	1	1	½	1		2	NB
Coprosma foetidissima	hūpiro, stinkwood	0	1	1	1	0	½	1	1		3	FB
Coprosma propinqua ssp. propinqua	mikimiki	2	1	1	1	1	1	0	1		5	F
Coprosma rhamnoides	bucks-horn coprosma	1	1	0	½	1	1	½	1		2	F
Coprosma tayloriae	tier coprosma	1	0	1	1	1	1	½	1		2	F
Coprosma tenuicaulis	swamp coprosma	2	0	1	1	0	1	½	1	W	3	F
Helichrysum lanceolatum var. "aggregatum"	niniao	1	1	0	½	1	1	½	½		1	I
Leptecophylla juniperina	prickly mingimingi	1	1	0	½	1	1	½	1		3	F
Leucopogon fasciculatus	mingimingi	0	1	0	½	1	½	½	1		4	F
Melicytus "Waipapa"	lowland porcupine shrub	1	0	0	½	1	1	½	1		½	F
Olearia avicenniifolia	grey tree daisy	1	0	0	½	1	1	0	1		4	I
Ozothamnus leptophyllus	tauhinu, cottonwood	2	0	0	½	1	1	0	1		2	I
Raukaua anomalus	stout netting bush	1	2	½	1	½	½	1	1		2	FN
Urtica ferox	ongaonga, tree nettle	0	1	½	1	1	½	½	½		2	I
CLIMBERS												
Clematis foetida	dainty clematis	0	1	0	1	1	½	½	½		5	
Clematis paniculata	puawānanga, bush clematis	1	1	0	1	0	½	½	½		7	
Freycinetia banksii	kiekie	0	1	½	1	½	0	1	½		10	FNI
Metrosideros diffusa	rātā vine	0	2	½	1	0	½	1	½		10	N
Metrosideros perforata	lowland rātā vine	0	2	0	1	½	½	1	½		15	N
Muehlenbeckia complexa	scrambling pōhuehue	2	0	0	½	1	1	0	1		2	FBI
Parsonsia capsularis	native jasmine	1	1	0	1	1	½	½	1		5	I
Passiflora tetrandra	kōhia, native passionvine	0	1	0	1	0	½	½	0		15	FN
Rhipogonum scandens	kareao, supplejack	0	2	1	1	0	½	1	½		15	F
Rubus australis	swamp lawyer	0	1	1	1	0	1	½	1		5	F
Rubus cissoides	bush lawyer	0	1	½	1	½	½	1	½		10	F
Rubus schmidelioides	shrub lawyer	0	1	0	1	1	1	½	1		5	F
GRASSES, SEDGES, FERNS & GROUND COVERS												
Acaena anserinifolia	piripiri, bidibid	1	1	½	1	1	1	½	1		0.2	
Asplenium appendiculatum ssp. appendiculatum	terrestrial spleenwort	0	2	0	1	½	0	1	½		0.3	
Asplenium bulbiferum	mauku, hen and chicken fern	0	1	½	1	0	0	1	½		0.5	B
Asplenium oblongifolium	shining spleenwort	0	2	0	1	1	½	1	0		0.5	
Asplenium polyodon	sickle spleenwort	0	1	0	1	½	½	1	½		0.5	
Astelia fragrans	ground lily	0	2	0	1	0	½	1	½		1.5	F
Astelia solandri	kōwharawhara	0	1	0	1	½	½	1	½		1	F
Blechnum discolor	piupiu crown fern	0	2	0	1	½	½	1	½		0.5	I
Blechnum procerum	beech hardfern	0	2	0	1	1	0	1	1		0.5	
Carex comans	maurea	2	0	0	1	1	1	0	1		0.3	
Carex flagellifera	whip sedge	2	0	½	1	½	1	0	½		0.5	
Carex forsteri	forest sedge	1	1	0	1	1	½	½	½		1	
Carex geminata	toetoe rautahi	2	0	1	1	0	1	½	1	W	1.5	I
Carex secta	pūrei	2	1	1	½	0	1	½	1	W	2	I
Carex solandri	droop sedge	1	2	0	1	½	½	½	1		1	

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Botanical Names	Māori & Common Names			Wet	Moist	Dry	Sun	Shade	Frost	Freshwater Wetland Only		
<i>Carex testacea</i>	bootstrap sedge	1	0	0	1	1	1	½	1		0.6	
<i>Carex virgata</i>	pūkio	2	1	1	½	0	1	½	1	W	1.5	I
<i>Cortaderia richardii</i>	South Island toetoe	2	0	1	1	1	1	0	1		2	I
<i>Dianella nigra</i>	tūrutu, blueberry	0	1	0	1	1	1	½	½		0.3	F
<i>Eleocharis acuta</i>	spike rush	1	0	1	½	0	1	½	1	W	1	
<i>Eleocharis sphacelata</i>	kuta	2	0	1	0	0	1	0	1	W	2	I
<i>Hypolepis ambigua</i>	hypolepis	1	0	½	1	0	1	½	1		1	
<i>Juncus edgariae</i>	wiwi	1	0	½	1	0	1	0	1		1	
<i>Juncus pallidus</i>	tall swamp rush	2	0	1	1	0	1	0	½	W	2	
<i>Juncus sarophorus</i>	blue wiwi	2	0	½	1	0	1	0	1		1	
<i>Libertia ixioides</i>	native iris	1	1	0	1	½	½	½	½		0.3	
<i>Microlaena avenacea</i>	bush ricegrass	1	2	½	1	½	½	1	1		0.5	
<i>Microlaena polynoda</i>	bamboo grass	0	2	0	1	1	½	½	½		2	
<i>Microlaena stipoides</i>	meadow ricegrass	1	1	0	1	1	½	½	½		0.2	
<i>Microsorium pustulatum</i>	hounds tongue fern	1	1	0	1	1	½	1	½		0.2	B
<i>Paesia scaberula</i>	mātātā, scented fern	2	0	0	1	1	1	0	1		0.3	
<i>Pellaea rotundifolia</i>	button fern	0	2	0	1	½	½	1	½		0.2	
<i>Phormium cookianum</i>	wharariki, coastal flax	2	0	0	1	1	1	0	1		1.5	N
<i>Phormium tenax</i>	harakeke, swamp flax	2	0	1	1	½	1	0	1	W	2	N
<i>Poa cita</i>	silver tussock	2	0	0	½	1	1	0	1		0.5	I
<i>Polystichum neozelandicum</i> ssp. <i>zerophyllum</i> (=P. <i>richardii</i>)	lowland shield fern	0	2	0	1	½	0	1	½		0.5	
<i>Polystichum vestitum</i>	prickly shield fern	1	2	½	1	0	½	1	1		1	I
<i>Schoenoplectus tabernaemontani</i>	kāpungawhā, lake clubrush	2	0	1	½	0	1	0	½	W	2	I
<i>Typha orientalis</i>	raupō	2	0	1	½	0	1	0	1	W	3	
<i>Uncinia banksii</i>	tufted hookgrass	0	1	0	½	1	½	½	½		0.3	
<i>Uncinia uncinata</i>	hookgrass	1	2	½	1	½	½	1	1		0.5	