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## Threatened and uncommon plants of New Zealand (2008 revision)

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**Abstract** A reappraisal of the conservation status of the indigenous New Zealand vascular plant flora is presented using the 2008 version of the threat classification system developed for the New Zealand Department of Conservation. The list comprises 897 taxa (38% of New Zealand's total indigenous vascular flora) in the following categories: Extinct—6 taxa, Threatened—180 taxa (comprising 91 Nationally Critical taxa, 45 Nationally Endangered, and 44 Nationally Vulnerable), At Risk—651 taxa (comprising 83 Declining, 6 Recovering, 20 Relict, and 542 Naturally Uncommon taxa), 25 taxa listed as either Vagrant (12) or Coloniser (13), and 35 as Data Deficient. A further 171 plants are listed as taxonomically indeterminate, being those which might warrant further conservation attention once their taxonomic status is clarified. Forty-four recognised taxa and 26 plants rated as taxonomically indeterminate, and previously considered to be threatened and/or uncommon, are removed from this updated listing. A brief analysis of the patterns of rarity exhibited by the listed taxa is presented. Overall, the conservation status of the New Zealand indigenous vascular plant flora is worsening, with 7.6% of this flora now regarded as threatened with extinction. A concordance of plants names from the 2004 listing is provided.

**Keywords** New Zealand; threatened vascular plants; uncommon vascular plants; conservation status; rarity

## INTRODUCTION

The last listing of New Zealand's threatened and uncommon indigenous vascular plants (de Lange et al. 2004) was produced using the first iteration of the New Zealand Threat Classification System (Molloy et al. 2002). The threat classification system has now been revised (Townsend et al. 2008) and the listing of threatened and uncommon vascular plants presented here uses this revision. The main differences from Molloy et al. (2002) are the removal of the Chronically Threatened (Serious and Gradual Decline) category, expansion of the At Risk category to include four new categories (Declining, Recovering, Relict, Naturally Uncommon), development of a recovery pathway within Nationally Vulnerable, relegation of the former categories Range Restricted and Sparse to the level of qualifiers, and changes to the criteria defining all of these threat categories.

The New Zealand Threat Classification System is a distinct departure from the international IUCN Red List categories (IUCN 2000) used in many parts of the world for undertaking threat assessments. The development and use of the New Zealand system reflects a number of issues, the most pertinent being that it more accurately reflects the nature of insular rarity within the New Zealand archipelago (see de Lange & Norton 1998) than the global IUCN system does. However, as indicated by Molloy et al. (2002), the New Zealand Threat Classification System does not preclude individuals from using IUCN threat categories, and information used for the New Zealand listings, and held by the Department of Conservation, is available to those wishing to undertake an independent IUCN threat assessment.

As outlined by Townsend et al. (2008), indigenous New Zealand biota are listed within broad taxonomic groupings, with the listing process overseen by an expert panel. In the case of the New Zealand vascular plant panel, panel members were appointed by the Department of Conservation in consultation with recognised plant bodies such as the New Zealand Botanical Society and New Zealand Plant Conservation Network. The resulting panel comprises a core group of six individuals (three from the Department of Conservation, one from a university, one from a museum herbarium, and another from a Crown Research Institute) with internationally and nationally recognised expertise in threat classification systems, threat assessments and the New Zealand vascular plant flora, and the ecology and systematics of threatened and uncommon plants. To assist with the running of this panel, the Department of Conservation provided a facilitator and a technical

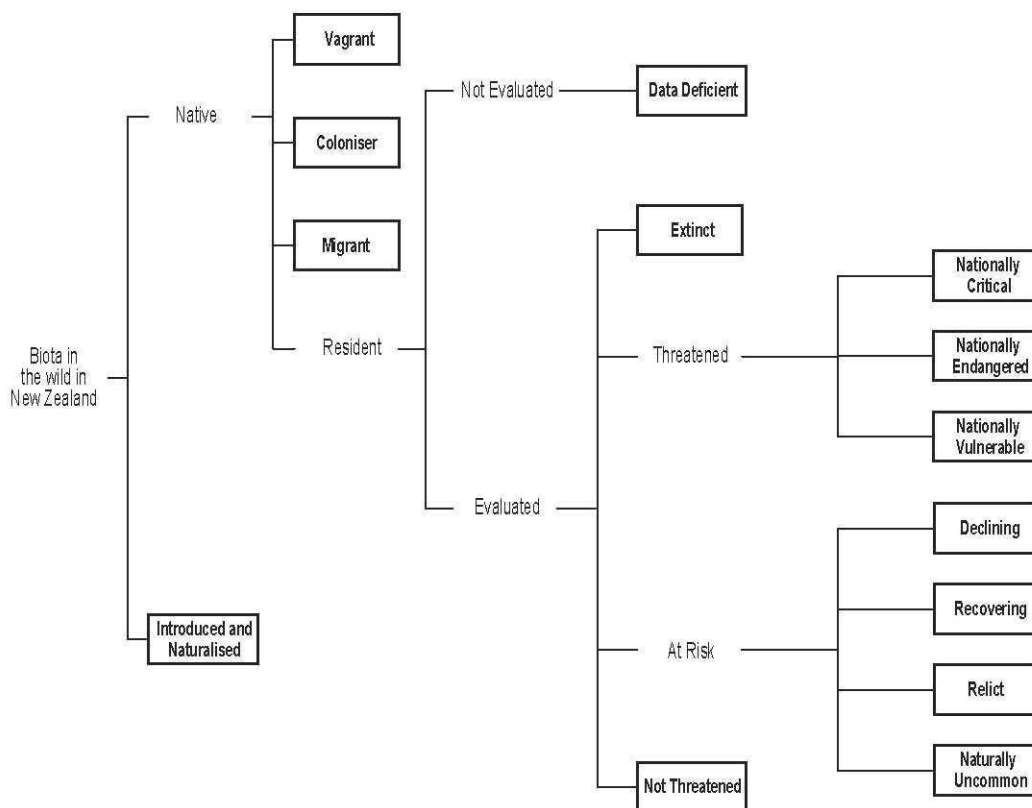
support officer. In accordance with the terms of reference provided in Townsend et al. (2008), the panel is an apolitical body and is responsible for the final listings published here. Further, following past agreements reached between the New Zealand Botanical Society Committee and the Department of Conservation (Rogan 2002), this paper continues the process of reporting threat rankings through peer-reviewed literature.

The set of lists in this paper updates and supersedes the previous threatened vascular plant listing (de Lange et al. 2004; repeated in Hitchmough et al. 2007) for New Zealand and remains valid from the date of publication until the next list is published.

## METHODS

The following lists are for vascular plant taxa (species, subspecies, varieties, and forma) believed to be indigenous to the New Zealand Botanical Region (Wardle 1991), excepting those endemic to Macquarie Island, which is Australian territory. Information for this revision was gathered from the previous four listings of threatened, local, and uncommon plants (Cameron et al. 1993, 1995; de Lange et al. 1999, 2004) and volumes 1–5 of the *New Zealand Flora* series supplemented by listings in de Lange et al. (2006) and Courtney (2008). This information was further supplemented by public submissions and expert opinion regarding the conservation status of the New Zealand indigenous vascular plant flora. Submissions were solicited from the New Zealand botanical community through the website of the *New Zealand Plant Conservation Network* ([www.nzpcn.org.nz](http://www.nzpcn.org.nz)), via notices published in other regional botanical society (and similar organisations) newsheets, newsletters, and journals. The submissions (587) were then collated and reviewed by the vascular plant panel in November 2007.

The placement of candidate taxa in risk categories was based on the criteria outlined by Townsend et al. (2008) (Fig. 1), individual submissions, panel knowledge, and referral to herbarium records and recent publications. In situations of doubt, provisional assessments of candidate taxa were referred to specialists in plant biosystematics, ecology, reproductive biology, demography, historical and current range information, threats, and projected decline patterns, for their advice. All provisional assessments were then re-evaluated by the panel in February 2008, and the interim listings were posted for external comment to selected individuals representing



**Fig. 1** New Zealand Threat Classification System (after Townsend et al. 2008).

universities, the Department of Conservation, environmental consultancies, Crown Research Institutes, New Zealand herbaria, the New Zealand Plant Conservation Network, and those members of the general public who provided the most candidate taxa for the listing process. These reviewers comments were then collated and discussed by the panel in March 2008, and the final listings presented in this paper were prepared in May 2008.

The present listings are the result of an assessment of the conservation status of all vascular plants known to be indigenous to New Zealand. Thus, the taxa listed here are the subset of the indigenous vascular flora that meet the criteria that define the categories of Extinct, Threatened (Nationally Critical, Nationally Endangered, Nationally Vulnerable), At Risk (Declining, Recovering, Relict, Naturally Uncommon), Vagrant, Coloniser, and Data Deficient (Townsend et al. 2008).

Four lists are presented (Appendices 1–4). Appendix 1 comprises the main New Zealand Extinct, Threatened and At Risk Vascular Plant list.

Appendix 2 lists all taxonomically indeterminate plants assessed using the same threat categories as in Appendix 1. Appendix 3 lists those vascular plants no longer considered to be Extinct, Threatened, or At Risk. Appendix 4 provides a concordance of names used by de Lange et al. (2004) and altered in this publication. We reiterate the point made by de Lange et al. (2004) that those plants listed in Appendix 2 as taxonomically indeterminate are assigned a provisional conservation status recognising that information on their taxonomic relationships has either not been formally evaluated or remains in doubt. These plants are those which, in our expert opinion (and usually the opinions of other biosystematists familiar with these plants), are sufficiently distinct to warrant further taxonomic investigation, and whose conservation status is sufficient to warrant threat listing. For these plants, taxonomic resolution is seen as a vital first step toward any further conservation management. It is pleasing to note that many of the plants listed in appendix 2 of de Lange et al. (2004) have now been taxonomically investigated

either as part of a monograph (Glenny 2004; Heenan & de Lange 2007; Burrows 2008) or individually (e.g., Heenan & de Lange (2004), Heenan & Molloy (2004), Murray et al. (2005), Ford (2007), Heenan & Barkla (2007), Heenan et al. (2007, 2008), de Lange & Murray (2008), Heenan (2008), Knox et al. (2008)) so that their status can be addressed and sensible conservation management undertaken.

Treatment of families follows Kubitzki (1990) for pteridophytes and gymnosperms, and the recommendations of the APG II (2003) and Mark Chase (pers. comm.) for angiosperms. The treatment of genera and species is based on recent publications and the opinions of specialists, while the arrangement of taxa by life forms in the analyses follows de Lange et al. (2006). Authority abbreviations of all published plant names follow those recommended by Brummitt & Powell (1992). Those plants considered to be taxonomically indeterminate (171 taxa) are listed by showing their probable affinity (e.g., *Ranunculus* aff. *stylosus*) and, where this is not known or there is a suspected aggregate, names are then listed alphabetically with their affinity noted if known with some confidence (e.g., *Lepidium* aff. *oleraceum* (a), (b), et seq., or *Cardamine* (a)). As a further measure, plants accepted as taxonomically indeterminate are only listed if that entity is supported with a herbarium voucher.

A brief analysis of the lists is also presented. To enable this assessment, tables were constructed using the following parameters and conditions.

Botanical provinces and altitudinal zones are based on Wardle (1991). However, for the altitudinal zones we have used the zone Lowland to refer to Wardle's Warm Temperate zone, and have included Wardle's Penialpine and Nival zones within our Alpine zone. We have also distinguished a Coastal zone to refer to those habitats that are exposed to regular influence from the sea as characterised by high saline inputs. The altitudinal zones decrease with increasing latitude, so that subantarctic islands (such as Campbell Island) have only Subalpine and Alpine zones above the Coastal zone.

The habitat types used in the analysis have been adapted from Wardle (1991) and reflect the major physiognomic cover types dominated by indigenous species. "Other scrub" includes scrub communities dominated by *Kunzea* and *Leptospermum* species, and open seral communities such as gumlands. "Tall-tussock grassland" includes those grassland communities dominated by *Chionochloa* and tall tussock-forming *Poa* species (e.g., *Poa foliosa*). "Short-tussock grassland" includes those grassland

communities dominated by *Festuca* species, *Rytidosperma* species, and some *Poa* species (e.g., *Poa cita* and *P. colensoi*). "Beach" includes dune systems and sand, gravel, and boulder beaches.

Individual taxa have been assigned to more than one altitude zone, habitat, or botanical province as appropriate.

## RESULTS AND DISCUSSION

This paper is based on a conservation assessment of the entire indigenous New Zealand vascular plant flora. This assessment has identified 898 described taxa of indigenous New Zealand vascular plants (or 38% of the total indigenous vascular flora (based on figures presented in de Lange et al. 2006)) as threatened or non-resident native (Appendix 1). Of these (with percentages of these figures given in relation to the total indigenous vascular flora given in brackets), 6 (0.2%) are believed to be Extinct, 180 (7.6%) are believed to be Threatened, 651 (27.6%) are listed as At Risk, and 25 (1%) are listed as either Vagrant or Coloniser. Thirty-five candidate taxa (1.5% of the total) have been assessed as Data Deficient because there was insufficient information to provide a more detailed assessment, although there were reasons to believe that they warranted listing. As well as the plants listed in Appendix 1, we have also listed (in Appendix 2) a further 171 named taxa and unnamed entities whose taxonomic status is either unclear or in question, or which have been proposed to the panel as being potentially distinct but which still require further taxonomic assessment and formal recognition. Because the status of these 171 entities requires further biosystematic research, we have not included them in the assessment presented here. Their inclusion in the list in Appendix 2 indicates that their taxonomic status needs to be resolved urgently.

In the previous threatened vascular plant listing of de Lange et al. (2004) a direct comparison between it and past listings was not made because of the major changes between the threat classification system used for that publication (Molloy et al. 2002) and the system employed in previous listings (e.g., Cameron et al. 1993, 1995; de Lange et al. 1999). The current listing uses Townsend et al. (2008), which is the second iteration of Molloy et al. (2002). Townsend et al. (2008) has some major changes, especially with respect to the criteria for the Threatened categories, and for At Risk taxa, where the new categories Recovering, Relict, Declining, and

Naturally Uncommon have been created (Fig. 1). Nevertheless, the broad categories are still sufficiently similar that some comparisons can be made between the 2004 listing and this one. In effect, many taxa previously listed as Chronically Threatened/Serious Decline have transferred to Threatened/Nationally Vulnerable, whilst those plants previously listed as Chronically Threatened/Gradual Decline have mostly shifted to At Risk/Declining. Plants listed previously as At Risk/Range Restricted or At Risk/Sparse have now mostly merged under At Risk/Naturally Uncommon. Allowing then for these differences, some broad comparisons between the 2004 and current listing can be made.

### General trends

Since the previous listing (de Lange et al. 2004) there has been a marked increase in the number of taxa listed as Threatened (from 122 to 180 taxa) and At Risk (from 499 to 651), while the number of taxa regarded as Data Deficient has dropped from 45 to 35. Those plants regarded as taxonomically indeterminate have also dropped from 196 to 171. While the changes reflect, to some extent, modifications to the threat classification system (see Townsend et al. 2008), they also reflect the worsening situation for indigenous vascular plants in the New Zealand environment. For example, 46 (26%) taxa previously listed as Chronically Threatened, At Risk, or Data Deficient by de Lange et al. (2004) are now listed as Threatened. Some of these increases have resulted from redefining of the criteria for Nationally Vulnerable to encompass many of those taxa previously listed as Chronically Threatened/Serious Decline (Townsend et al. 2008; e.g., *Dactylanthus taylorii*), while some narrow-range, biologically uncommon species with no known active threats are now listed as Threatened because of modifications to the population size and area of occupation criteria for the Threatened categories (e.g., *Hebe adamsii*, *Myosotis laeta*). These taxa are qualified "Stable" (St) to show that their presence on the list stems from natural rarity rather than an active threat. Nevertheless, the majority of the 35 (20%) new Threatened taxa are genuinely at risk of extinction. Many of these are plants restricted to the eastern South Island, especially the intermontane basins where their habitats (such as grey scrub and ephemeral wetlands) are now in serious decline due to changing land use practices (e.g., *Gnaphalium luteoalbum* var. *compactum*) or from invasive grasses now dominating their natural regeneration sites (e.g., *Carmichaelia* spp., *Olearia* spp.).

Another reason for the increase in numbers of Threatened taxa has been the renewed interest in higher plant biosystematics, with 18 (10%) taxa entering the Threatened list as the result of recent taxonomic revisions. In most cases these revisions have been of plants previously listed as taxonomically indeterminate (e.g., *Gentianella* spp., *Carex* spp., *Hypericum* spp., and *Olearia adenocarpa*). However, a few result from discoveries of new species of plant previously unknown to New Zealand botanists (e.g., *Hebe saxicola*, *Myrsine umbricola*, *Olearia telmatica*, and *Pseudowintera insperata*). Increases in the numbers of Threatened taxa have also been due to the greater number of species-specific surveys which have helped clarify the status of taxa previously listed as Data Deficient since, in some cases, 1981 (see Given 1981) (e.g., *Chenopodium detestans*, *Epilobium hirtigerum*, *Myosotis cheesemani*, *Libertia cranwelliae*).

While taxonomic revision and field survey have contributed to the recognition of an overall worsening status in the vascular plant flora, the surveys have had some positive outcomes as well. In particular, formal taxonomic recognition has finally resolved issues surrounding some long-standing informal entities. The value of regular field survey and monitoring to establish trends cannot be overstated, as many past listings, as far back as the first listing by Given (1976), were often based on intuition rather than hard data. For example, targeted field surveys have recently shown apparently well-known species to be very much more seriously threatened than had been previously been believed (e.g., kaka-beak (*Clianthus maximus*)). Surveys and detailed ecological research (Grüner 2003) also helped recognise the almost universal recruitment failure of the mainly eastern South Island brooms (*Carmichaelia* spp.).

### Taxonomic groups

Overall, the families that have the greatest representation in this listing (i.e., >30 taxa; Table 1) remain the same as those with the greatest representation on the 2004 list (de Lange et al. 2004), though with increases in the number of taxa within each, for example, Asteraceae (146 cf. 137 in 2004), Poaceae (88 cf. 83), Plantaginaceae (76 cf. 66), Orchidaceae (43 cf. 33), Cyperaceae (57 cf. 52), and Boraginaceae (34 cf. 31). Of those taxa listed as Threatened, the main contributing families ( $\geq 10$  taxa) are also the same on both lists. However, since 2004 the numbers of taxa in Asteraceae, Plantaginaceae, and Boraginaceae have all increased, the Asteraceae and

Boraginaceae by four taxa each, and the Plantaginaceae by five (Table 1).

As with the 2004 listing, several of the most prominent and species-rich genera in the main contributing families (Table 1) also dominate the assessment of the lists by genera (Table 2). The same key species-rich genera, namely *Hebe* (48 cf. 45 in 2004), *Myosotis* (33 cf. 30 in 2004), *Celmisia* (28 cf. 25 in 2004), *Carex* (33 cf. 34 in 2004), remain prominent (Table 2). Other important contributing genera ( $\geq 20$  taxa listed) are *Gentianella* (22), *Olearia* (20), and *Ranunculus* (21). Again, the 50% increase of *Gentianella* from 11 taxa in 2004 to the 22 taxa in this listing is entirely due to a major taxonomic revision of the genus (Glenny 2004), which resulted in a large number of mostly new uncommon and/or seriously threatened taxa. The increase, by three, of *Ranunculus* from the 2004 listing also largely reflects recent taxonomic revision (Heenan et al. 2006).

When these figures are adjusted to include only those Threatened taxa listings (Table 2), the overall contribution of many of the country's species-rich genera that are characterised by highly localised, but not necessarily threatened, taxa (e.g., *Aciphylla*, *Brachyglottis*, *Carex*, *Celmisia*, *Chionochoa*, *Coprosma*, *Gentianella*, *Leptinella*, *Poa*, *Ranunculus*, and *Senecio*) drops, leaving only *Myosotis* (13)

and *Hebe* (12), prominent. This mirrors patterns already observed in previous listings (de Lange et al. 1999, 2004). Although *Hebe* and *Myosotis* are also species-rich genera typified by a large number of naturally uncommon, range-restricted endemics, they appear more seriously threatened than the other key species-rich genera. We believe there is an urgent need for further study into the ecology of *Myosotis*, particularly their population dynamics. Many *Myosotis* species are known from single populations, and for some species individuals can number in the tens rather than hundreds. While there is a dearth of reliable information on the long-term stability of species with such small populations, field observations and historical records suggest that small populations are not unusual for some of these species. For conservation purposes, it is imperative that these assessments of conservation status be tempered with hard evidence to avoid management effort being directed into securing species that may never naturally attain "large" population sizes.

### Life forms

With respect to life form, non-composite herbs (268 cf. 232 in 2004) and dicotyledonous shrubs (193 cf. 155 in 2004) comprise 51% of the listed taxa, followed by composite herbs (109 cf. 103 in 2004), which contribute another 12% (Table 3). This is an

**Table 1** Number of taxonomically determinate threatened and uncommon New Zealand plants with respect to plant family (only families with  $\geq 10$  taxa are included).

Family	Extinct	Threatened	At Risk	Vagrant	Coloniser	Data Deficient	Total
Asteraceae		25	114	1		6	146
Poaceae		13	68	1		6	88
Plantaginaceae		16	57	1	1	1	76
Cyperaceae		11	40		1	5	57
Orchidaceae		10	24	4	3	2	43
Apiaceae		3	31			1	35
Boraginaceae	2	14	16			2	34
Ranunculaceae		6	19			1	26
Fabaceae		11	11			1	23
Gentianaceae		6	17				23
Ericaceae			17			1	18
Brassicaceae	1	11	7				19
Rubiaceae		2	13			1	16
Onagraceae		2	11	1		1	15
Thymelaeaceae		2	9			3	14
Araliaceae			12				12
Pittosporaceae		5	6				11
Totals	3	137	472	8	5	31	654
Other families (83)	3	43	179	4	8	4	241
Totals	6	180	651	12	13	35	897

**Table 2** Number of taxonomically determinate threatened and uncommon New Zealand plants with respect to plant genus (only genera with  $\geq 10$  taxa are included).

	Extinct	Threatened	At Risk	Vagrant	Coloniser	Data Deficient	Total
<i>Hebe</i>		12	36				48
<i>Carex</i>		5	28			1	33
<i>Myosotis</i>	2	13	16			2	33
<i>Celmisia</i>			26			2	28
<i>Gentianella</i>		5	17				22
<i>Ranunculus</i>		3	17			1	21
<i>Leptinella</i>		3	15			1	19
<i>Olearia</i>		9	11				20
<i>Aciphylla</i>		1	16				17
<i>Coprosma</i>		2	14			1	17
<i>Poa</i>		2	15				17
<i>Carmichaelia</i>		9	6			1	16
<i>Epilobium</i>		2	11	1		1	15
<i>Senecio</i>		3	11	1			15
<i>Pimelea</i>		2	9			3	14
<i>Brachyglottis</i>		1	11				12
<i>Chionochloa</i>			13				13
<i>Dracophyllum</i>			11			1	12
<i>Pittosporum</i>		5	6				11
<i>Pterostylis</i>		2	7	1			10
<i>Uncinia</i>		2	6			2	10
Totals	2	81	302	3		16	404
Other genera (248)	4	99	349	9	13	19	493
Totals	6	180	651	12	13	35	897

**Table 3** Number of taxonomically determinate threatened and uncommon New Zealand plants with respect to life form.

	Extinct	Threatened	At Risk	Vagrant	Coloniser	Data Deficient	Total
Non-composite dicot herbs	4	64	184	3	7	6	268
Dicot shrubs	1	36	147		1	8	193
Composite dicot herbs		13	89	1		6	109
Grasses		13	68	1		6	88
Sedges		11	40		1	5	57
Dicot trees		19	36				55
Ferns		6	33	2	1	2	44
Orchids		9	24	4	3	2	42
Other monocot herbs		5	12				17
Hemiparasites	1		9	1			11
Dicot lianes		1	4				5
Fern allies		2					2
Conifers			2				2
Monocot trees			2				2
Parasites		1					1
Saprophytes			1				1
Totals	6	180	651	12	13	35	897



overall gain of 81 taxa from the 2004 listings for these life forms, and signals a distinct shift from the previous dominance of composite and non-composite herbs noted by de Lange et al. (2004). The most likely reasons for increase in the prominence of non-composite herbs and dicotyledonous shrubs is an improvement in our knowledge of the status of many of the contributing taxa, and the fact that most of these plants occur in eastern South Island habitats which are now seriously under threat. Monocotyledonous contributions remain dominated by grasses (88; 9.8%), sedges (57; 6.4%), and orchids (42; 4.7%), while ferns (44) still provide 5% of all listed taxa. These patterns are comparable to those observed by de Lange et al. (2004).

If only those taxa listed as Threatened are considered, non-composite (64) and dicotyledonous shrubs (36) are still the majority (100; 56%). Notably, the numbers of threatened composites drop from 109 to 14 (7.7% of all threatened plant listings), grasses from 88 to 13 (7.3%), and sedges from 57 to 11 (6.2%). These changes reflect the high incidence of natural rarity within these groupings rather than actual threatened status. There are also far fewer Threatened (9; 5%) than Naturally Uncommon orchids (24; 13.5%) in this listing. Of the Threatened orchids, one (*Sullivania minor*) is abundant in Australia, and two (*Anzybas carsei* and *Linguella puberula*) are only doubtfully endemic to New Zealand with very close (if not conspecific) relatives in Australia.

### Habitat and distribution

As with the 2004 list, the largest proportion (265; 30%) of the plants listed are from Lowland habitats, closely followed by those from Montane (219; 24.3%), and Coastal habitats (205; 23%) (Table 4). These are patterns already evident in the first listings of New Zealand threatened plants (Given 1976, 1981). The same holds true that those Threatened plants occupying Alpine (10) and Subalpine zones (5) scarcely contribute to the main Threatened plant

listing, reflecting the fact that most of these plants are narrow-range endemics or sparsely distributed and are not directly threatened (cf. de Lange & Norton 1998; de Lange et al. 1999, 2004).

In terms of habitat type (Table 5), the distribution of plants follows that seen in the 2004 list, with Cliff-dwelling taxa still dominating (201 taxa, 38 of which are in the Threatened category). Closed Forest constitutes the next major contributing habitat type (155 taxa, 31 Threatened), followed by 90 taxa from Boulder Field, Talus, and Scree habitats. None of the remaining habitat types contributed more than 50 taxa, and all except Cliff-dwelling and Closed Forest become negligible contributors (<20 taxa) when At Risk, Vagrant, Coloniser, and Data Deficient taxa are removed. Indeed, only Boulder Field, Talus, and Scree (19), and Wetland Margins (13) contribute  $\geq 10$  threatened taxa to the Threatened listings.

With respect to botanical provinces, in 2004 Otago and Canterbury had the highest number of Threatened and At Risk plants, with 198 and 191 taxa, respectively. In this listing, these two provinces retain this status, although Canterbury now has the highest number of Threatened and At Risk taxa (223). However, when all At Risk, Vagrant, Coloniser, and Data Deficient taxa are excluded, Southland, with 67 taxa, is the province with the most Threatened taxa (Table 6), while Canterbury still rates highly, with 65 taxa. This is a spectacular increase over the 2004 figure for Southland (9). Other traditional species-rich "hot spots" also retain high listings, even when At Risk, Vagrant, Coloniser, and Data Deficient taxa are excluded; in particular, 57 Threatened taxa are recorded for Northland, 37 for Western Nelson, and 44 for Otago. Several provinces have shown major increases in the numbers of Threatened taxa; in particular, Northland (57 in this listing cf. 35 in 2004), Southern North Island (48 cf. 24), Auckland (45 cf. 28), Otago (44 cf. 28), Volcanic Plateau (41 cf. 11), and Marlborough (40 cf. 14). The increase in

**Table 4** Number of taxonomically determinate threatened and uncommon New Zealand plants with respect to altitudinal zone.

	Extinct	Threatened	At Risk	Vagrant	Coloniser	Data Deficient	Total
Lowland	1	65	176	7	9	7	265
Montane	3	62	134	2		17	218
Coastal	1	38	158	3	4	1	205
Alpine		10	101			9	120
Subalpine	1	5	82			1	89
Totals	6	180	651	12	13	35	897

**Table 5** Number of taxonomically determinate threatened and uncommon New Zealand plants with respect to major habitats.

	Extinct	Threatened	At Risk	Vagrant	Coloniser	Data Deficient	Total
Cliff	2	38	152	2	3	4	201
Closed forest	1	31	113	4	2	4	155
Boulder field, talus and scree		19	67				90
Beach		8	35		1		44
Fell field and herbfield			37			4	41
Flush and seepages		6	28			4	38
Turf and cushion	2	6	28			1	37
Coastal scrub		9	25	1			35
Short-tussock grassland		5	22				32
Tall-tussock grassland	1	2	29				32
Wetland margin		13	12	1	1	1	28
Oligotrophic wetland		7	19		2		28
Other scrub		8	10	3	1	1	23
Subalpine scrub		1	20			1	22
Grey scrub		9	11				20
Eu-/mesotrophic wetland		6	10	1	1	2	20
Estuary		3	8		2	1	14
River bed		2	9			1	12
Aquatic		3	6			2	11
Open forest		1	5				6
Geothermal		1	4				5
Inland saline		1					1
Other grassland		1	1				2
Totals	6	180	651	12	13	35	897

**Table 6** Number of taxonomically determinate threatened and uncommon New Zealand plants with respect to botanical provinces (after Wardle 1991).

	Extinct	Threatened	At Risk	Vagrant	Coloniser	Data Deficient	Total
Canterbury	2	65	158	1		17	243
Otago	1	44	166		1	21	233
Western Nelson		37	149	1	1	10	198
Northland	1	57	112	5	4	6	185
Marlborough	1	40	129	1		12	183
Southland	1	67	141		1	14	224
Southern North Island	2	49	119	1	1	8	180
Auckland	1	46	116	3	2	6	174
Volcanic Plateau	1	41	98	2		8	150
Sounds-Nelson		27	107	1	2	4	141
Westland		19	103		1	12	135
Fiordland		11	96	2		3	112
Rakiura		10	93			2	105
Gisborne	1	27	68			7	103
Taranaki		29	60			6	95
Chatham		18	69				87
Campbell			61				61
Kermadec		6	41	1	3		51
Three Kings		13	30		2		45

numbers of Threatened taxa from these areas (as well in Southland and Canterbury) has several causes, including improved knowledge of plant distributions stemming from dedicated survey (especially vegetation surveys carried out in support of high country tenure review in eastern South Island), taxonomic resolution of long-established tag-named entities, the discovery of novel plants, and the loss of key habitat types through changes in land use practices over the last decade.

## CONCLUSIONS

The overriding message from this listing is that New Zealand, having enjoyed a period of relative stability in the numbers of Threatened taxa over the last four listings (Cameron et al. 1993, 1995; de Lange et al. 1999, 2004), can now expect to see increases in the number of threatened plants. While some of these increases result from improving biosystematic information about our flora, and also from resolving the status of many of the plants listed through better field survey and monitoring, it is clear that not all changes in the numbers of Threatened taxa can be attributed to these factors and that the overall situation for New Zealand's indigenous vascular flora is worsening. The admission of two *Myosotis* species—*M. cinerascens* and *M. laingii*—to the Extinct category in this listing is a reflection of our final reluctant conclusion that these endemic plants (presumably always naturally scarce), were already heading towards extinction when formally recognised in 1912 and 1917, respectively. Both species are known only from a handful of collections, and neither has been seen alive for the last 90 years or so. Perhaps little could have been done to prevent their loss, which went unnoticed until formalised threatened plant listings for New Zealand were initiated in 1976. The situation probably applies to the other species categorised as Extinct since 1993 (Cameron et al. 1993)—*Lepidium obtusatum*, *Logania depressa*, *Stellaria elatinooides*, and *Trilepidea adamsii*—none of which have been found in the wild since 1954. However, we cannot plead “botanical ignorance” any longer. We now know how vulnerable many New Zealand plants are, and unless further action is taken soon (within the next decade for some plants), we stand to lose from the wild a wealth of botanical diversity, including such iconic species as *Clianthus puniceus* and *C. maximus*, and other equally significant but less well-known plants such as *Ceratocephala pungens*, *Lepidium kirkii*, and *Pimelea actea*.

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**APPENDIX 1** New Zealand threatened and uncommon vascular plant list. †Denotes indigenous taxa found naturally outside New Zealand. ‡Denotes an addition to this list (cf. de Lange et al. 2004).

### Qualifiers

Full definitions are provided for the qualifiers used in this list by Townsend et al. (2008).

CD Conservation Dependent  
 DP Data Poor  
 De Designated  
 EW Extinct in the Wild  
 EF Extreme Fluctuations  
 IE Island Endemic  
 Inc Increasing  
 OL One Location in New Zealand  
 PD Partial Decline  
 RR Range Restricted  
 RF Recruitment Failure  
 SO Secure Overseas  
 Sp Sparse  
 St Stable  
 TO Threatened Overseas

### Extinct (6)

Taxa for which there is now no reasonable doubt—following repeated surveys in known or expected habitats at appropriate times (diurnal, seasonal and annual) and throughout the plant's historic range—that the last individual has died. Plants that are extinct in the wild but occur in captivity or cultivation are not listed in this category; nor are those vagrant taxa believed to be extinct in this country at present. Vagrant taxa are not listed as extinct because of their potential to reappear within the New Zealand Botanical Region, at any time (e.g., *Pterostylis nutans*, which temporarily established twice in New Zealand before 1942 and then was not recorded again from the wild in this country until 1991).

<i>Lepidium obtusatum</i> Kirk	Brassicaceae
<i>Logania depressa</i> Hook.f.	Loganiaceae
<i>Myosotis cinerascens</i> Petrie	Boraginaceae
<i>Myosotis laingii</i> Cheeseman	Boraginaceae
<i>Stellaria elatinoides</i> Hook.f.	Caryophyllaceae
<i>Trilepidea adamsii</i> (Cheeseman) Tiegh.	Loranthaceae

### Threatened (180)

Threatened taxa are those which meet the criteria specified by Townsend et al. (2008) for the categories 1. Nationally Critical, 2. Nationally Endangered, and 3. Nationally Vulnerable.

#### 1. Nationally Critical (91)

Nationally Critical taxa are those which fit the criteria as defined by Townsend et al. (2008). These include “Nationally Critical A”—very small population (natural or unnatural); “Nationally Critical B”—small population (natural or unnatural) with a high ongoing or predicted decline; or “Nationally Critical C”—population (irrespective of size or number of sub-populations) with a very high ongoing or predicted decline (>70%).

<i>Acaena rorida</i> B.H.Macmill. OL	Rosaceae
<i>Ackama nubicola</i> de Lange CD, OL, RF	Cunoniaceae
<i>Anzybas carsei</i> (Cheeseman) D.L.Jones et M.A.Clem. CD, EF, OL, RF	Orchidaceae
† <i>Atriplex cinerea</i> Poir. SO	Chenopodiaceae
<i>Brachyglottis huntii</i> (F.Muell.) B.Nord. CD, IE	Asteraceae
<i>Brachyscome pinnata</i> Hook.f. CD, RR	Asteraceae
<i>Carex dolomitica</i> Heenan et de Lange CD, OL	Cyperaceae
<i>Carmichaelia carmichaeliae</i> (Hook.f.) Heenan RF, RR	Fabaceae
<i>Carmichaelia curta</i> Petrie De, RF	Fabaceae
<i>Carmichaelia hollowayi</i> G.Simpson CD, RF, RR	Fabaceae
† <i>Centipeda minima</i> (L.) A.Braun et Asch. subsp. <i>minima</i> EF, SO	Asteraceae
<i>Ceratocephala pungens</i> Garn.-Jones DR, EF	Ranunculaceae
† <i>Chaerophyllum basicola</i> (Heenan et Molloy) K.F.Chung CD, RR, St	Apiaceae
† <i>Chenopodium detestans</i> Kirk DR, EF, TO	Chenopodiaceae

† <i>Christella dentata</i> (Forssk.) Brownsey et Jenny	CD, SO	Thelypteridaceae
<i>Clianthus maximus</i> Colenso	CD, RF	Fabaceae
<i>Clianthus puniceus</i> (G. Don) Sol. ex Lindl.	CD, OL, RF	Fabaceae
<i>Crassula multicaulis</i> (Petrie) A.P. Druce et Given	DF, EF	Crassulaceae
† <i>Crassula peduncularis</i> (Sm.) F. Meigen	EF, RR, SO	Crassulaceae
† <i>Daucus glochidiatus</i> (Labill.) Fisch., C.A. Mey. et Avé-Lall.	DP, SO	Apiaceae
<i>Davallia tasmanii</i> subsp. <i>cristata</i> Konrat	CD, OL, RF, RR, St,	Davalliaceae
<i>Deyeuxia lacustris</i> Edgar et Connor	DP, RR, Sp	Poaceae
<i>Dichelachne lautumia</i> Edgar et Connor	RR, St	Poaceae
† <i>Epilobium hirtigerum</i> A. Cunn.	DP, EF, SO	Onagraceae
<i>Gentianella calcis</i> subsp. <i>calcis</i> Glenney et Molloy	CD, EF, OL	Gentianaceae
<i>Gentianella calcis</i> subsp. <i>manahune</i> Glenney et Molloy	EF, OL	Gentianaceae
<i>Gentianella calcis</i> subsp. <i>taiko</i> Glenney et Molloy	EF, OL	Gentianaceae
<i>Gentianella calcis</i> subsp. <i>waipara</i> Glenney et Molloy	OL	Gentianaceae
<i>Gentianella scopulorum</i> Glenney	CD, EF, OL	Gentianaceae
<i>Gnaphalium luteoalbum</i> var. <i>compactum</i> Kirk	DP, EF, RR, Sp	Asteraceae
<i>Gunnera hamiltonii</i> Kirk	RF	Gunneraceae
<i>Hebe adamsii</i> (Cheeseman) Cockayne et Allan	DP, OL, St	Plantaginaceae
<i>Hebe barkeri</i> (Cockayne) Cockayne	CD, IE	Plantaginaceae
<i>Hebe breviracemosa</i> (W.R.B. Oliv.) Cockayne et Allan	CD, EF, IE, OL	Plantaginaceae
<i>Hebe rigidula</i> var. <i>sulcata</i> Bayly et Kellow	RR, St	Plantaginaceae
† <i>Hebe saxicola</i> de Lange	OL, Sp	Plantaginaceae
<i>Hebe societatis</i> Bayley et Kellow	OL	Plantaginaceae
<i>Hibiscus richardsonii</i> Lindl.	EF, Sp, TO	Malvaceae
<i>Hypericum minutiflorum</i> Heenan	DP, EF	Hypericaceae
† <i>Juncus holoschoenus</i> var. <i>holoschoenus</i> R. Br.	CD, DP, EF, SO	Juncaceae
<i>Lepidium banksii</i> Kirk	CD, EF	Brassicaceae
<i>Lepidium kirkii</i> Petrie	CD, EF	Brassicaceae
<i>Leptinella filiformis</i> (Hook. f.) D.G. Lloyd et C.J. Webb	CD, DP, RR	Asteraceae
<i>Leptinella rotundata</i> (Cheeseman) D.G. Lloyd et C.J. Webb	DP, Sp	Asteraceae
<i>Libertia cranwelliae</i> Blanchon, B.G. Murray et Braggins	DP	Iridaceae
<i>Linguella puberula</i> (Hook. f.) D.L. Jones, M.A. Clem. et Molloy	EF, Sp	Orchidaceae
† <i>Lobelia fugax</i> Heenan, S.P. Courtney et P.N. Johnson	EF, RR	Lobeliaceae
<i>Mazus novaezeelandiae</i> subsp. <i>impolitus</i> f. <i>hirtus</i> Heenan	Sp	Phrymaceae
<i>Metrosideros bartlettii</i> J.W. Dawson	CD, RR	Myrtaceae
<i>Montia drucei</i> (Heenan) Heenan	St	Portulacaceae
<i>Myosotis albosericca</i> Hook. f.	OL, Sp	Boraginaceae
<i>Myosotis angustata</i> Cheeseman	OL, St	Boraginaceae
<i>Myosotis australis</i> var. <i>lytteltonensis</i> Laing et Wall	CD, Sp	Boraginaceae
<i>Myosotis colensoi</i> (Kirk) J.F. Macbr.	RR	Boraginaceae
<i>Myosotis laeta</i> Cheeseman	DP, St	Boraginaceae
<i>Myosotis petiolata</i> Hook. f. var. <i>petiolata</i>	DP, RR, Sp	Boraginaceae
<i>Myosotis petiolata</i> var. <i>pottsiana</i> L.B. Moore	DP, EF	Boraginaceae
<i>Myosurus minimus</i> subsp. <i>novae-zeelandiae</i> (W.R.B. Oliv.) Garn.-Jones	EF, Sp	Ranunculaceae
† <i>Myrsine umbricola</i> Heenan et de Lange	DP, RF, RR	Myrsinaceae
<i>Olearia adenocarpa</i> Molloy et Heenan	CD, D <sub>e</sub> , RF	Asteraceae
<i>Olearia gardneri</i> Heads	CD, RF	Asteraceae
<i>Olearia pachyphylla</i> Cheeseman	OL	Asteraceae
<i>Ophioglossum petiolatum</i> Hook.	RF, SO, Sp	Ophioglossaceae
<i>Ourisia modesta</i> Diels	Sp	Plantaginaceae
<i>Pachycladon exilis</i> (Heenan) Heenan et A.D. Mitch.	CD, OL	Brassicaceae
<i>Pachycladon stellata</i> (Allan) Heenan et A.D. Mitch.	DP	Brassicaceae
<i>Pennantia baylisiana</i> (W.R.B. Oliv.) G.T.S. Baylis	CD, IE, OL	Pennantiaceae
† <i>Phylloglossum drummondii</i> Kunze	EF, SO	Lycopodiaceae
<i>Pimelea actea</i> C.J. Burrows	CD, OL	Thymelaeaceae
<i>Pittosporum patulum</i> Hook. f.	CD, RF, Sp	Pittosporaceae
<i>Poa aucklandica</i> subsp. <i>rakiura</i> Edgar	OL	Poaceae
<i>Poa spania</i> Edgar et Molloy	CD, OL, Sp	Poaceae
† <i>Pomaderris apetala</i> subsp. <i>maritima</i> N.G. Walsh et F. Coates	CD, RF, TO	Rhamnaceae

## APPENDIX 1 (continued)

<i>†Pseudowintera insperata</i> Heenan et de Lange <sup>DP</sup>	Winteraceae
<i>Pterostylis micromega</i> Hook.f. <sup>CD, DP, EF</sup>	Orchidaceae
<i>Puccinellia raroflorens</i> Edgar <sup>CD, DP</sup>	Poaceae
<i>†Ranunculus paucifolius</i> Kirk <sup>CD, OL</sup>	Ranunculaceae
<i>Ranunculus viridis</i> H.W.Wilson et Garn.-Jones <sup>DP, OL, St</sup>	Ranunculaceae
<i>Scutellaria novae-zelandiae</i> Hook.f. <sup>EF, RR</sup>	Lamiaceae
<i>†Sebaea ovata</i> (Labill.) R.Br. <sup>CD, EF, SO</sup>	Gentianaceae
<i>Senecio kermadecensis</i> Belcher <sup>De, DP, EF, IE, OL</sup>	Asteraceae
<i>Senecio lautus</i> var. <i>esperensis</i> Sykes <sup>DP, EF, IE, OL</sup>	Asteraceae
<i>Senecio scaberulus</i> (Hook.f.) D.G.Drury <sup>EF</sup>	Asteraceae
<i>Simplicia buchananii</i> (Zotov) Zotov <sup>DP, RR, Sp</sup>	Poaceae
<i>Simplicia laxa</i> Kirk <sup>CD, Sp</sup>	Poaceae
<i>†Sullivania minor</i> (R.Br.) D.L.Jones et M.A.Clem. <sup>CD, EF, OL, SO</sup>	Orchidaceae
<i>Tecomanthe speciosa</i> W.R.B.Oliv. <sup>CD, IE, OL</sup>	Bignoniaceae
<i>†Thelymitra matthewsii</i> Cheeseman <sup>EF, RR, TO</sup>	Orchidaceae
<i>Thelymitra sanscilia</i> Irwin ex Hatch <sup>DP, EF, Sp</sup>	Orchidaceae
<i>†Triglochin palustris</i> L. <sup>DP, SO</sup>	Juncaginaceae
<i>Uncinia perplexa</i> Heenan et de Lange <sup>CD, OL</sup>	Cyperaceae

## 2. Nationally Endangered (45)

Nationally Endangered taxa are those which fit the criteria as defined by Townsend et al. (2008). These include “Nationally Endangered A”—small population (natural or unnatural) that has a low to high ongoing or predicted decline; “Nationally Endangered B”—small stable population (unnatural); or “Nationally Endangered C”—moderate population and high ongoing or predicted decline.

<i>†Amphibromus fluitans</i> Kirk <sup>EF, TO</sup>	Poaceae
<i>Asplenium pauperequitum</i> Brownsey et P.J.Jacks. <sup>EF</sup>	Aspleniaceae
<i>Australopyrum calcis</i> subsp. <i>calcis</i> Connor et Molloy <sup>CD, St, OL</sup>	Poaceae
<i>Carex inopinata</i> V.J.Cook <sup>CD, DP, Sp</sup>	Cyperaceae
<i>Carex unciifolia</i> Cheeseman <sup>RR, St, Sp</sup>	Cyperaceae
<i>Carmichaelia muritai</i> (A.W.Purdie) Heenan <sup>CD, RF, RR</sup>	Fabaceae
<i>Carmichaelia stevensonii</i> (Cheeseman) Heenan <sup>RF, RR</sup>	Fabaceae
<i>Carmichaelia torulosa</i> (Kirk) Heenan <sup>DP, RF</sup>	Fabaceae
<i>Coprosma talbrockiei</i> L.B.Moore et R.Mason <sup>RF, RR, Sp</sup>	Rubiaceae
<i>Coprosma waima</i> A.P.Druce <sup>CD, DP, RR</sup>	Rubiaceae
<i>Cortaderia turbaria</i> Connor <sup>CD, IE, RF, RR</sup>	Poaceae
<i>Epilobium pictum</i> Petrie <sup>DP, Sp</sup>	Onagraceae
<i>Gunnera densiflora</i> Hook.f. <sup>DP</sup>	Gunneraceae
<i>Hebe arganthera</i> Garn.-Jones, Bayly, W.G.Lee et Rance <sup>RR, Sp</sup>	Plantaginaceae
<i>Hebe armstrongii</i> (J.B.Armstr.) Cockayne et Allan <sup>RF</sup>	Plantaginaceae
<i>Hebe perbella</i> de Lange <sup>DP, RR, Sp</sup>	Plantaginaceae
<i>Hebe salicornioides</i> (Hook.f.) Cockayne et Allan <sup>RR</sup>	Plantaginaceae
<i>Heliohebe raoulii</i> subsp. <i>maccaskillii</i> (Allan) Garn.-Jones <sup>RR</sup>	Plantaginaceae
<i>†Hibiscus diversifolius</i> Jacq. subsp. <i>diversifolius</i> <sup>SO, Sp</sup>	Malvaceae
<i>Isolepis basilaris</i> Hook.f. <sup>De</sup>	Cyperaceae
<i>†Lagenifera montana</i> Hook.f. <sup>DP, SO, Sp</sup>	Asteraceae
<i>Leonohebe cupressoides</i> (Hook.f.) Heads <sup>RF</sup>	Plantaginaceae
<i>Lepidium sisymbrioides</i> Hook.f. <sup>DP, Sp</sup>	Brassicaceae
<i>Lepidium solandri</i> Kirk <sup>DP</sup>	Brassicaceae
<i>Leptinella nana</i> (D.G.Lloyd) D.G.Lloyd et C.J.Webb <sup>CD, EF, Sp</sup>	Asteraceae
<i>†Lobelia carens</i> Heenan <sup>DP</sup>	Lobeliaceae
<i>Muehlenbeckia astonii</i> Petrie <sup>CD, RF</sup>	Polygonaceae
<i>Myosotis cheesemanii</i> Petrie <sup>DP, Sp</sup>	Boraginaceae
<i>Myosotis matthewsii</i> L.B.Moore <sup>DP, EF, RR</sup>	Boraginaceae
<i>Myosotis petiolata</i> var. <i>pansa</i> L.B.Moore <sup>Sp</sup>	Boraginaceae
<i>Myosotis pygmaea</i> var. <i>minutiflora</i> G.Simpson et J.S.Thomson <sup>DP, EF</sup>	Boraginaceae
<i>Myosotis saxosa</i> Hook.f. <sup>OL, St</sup>	Boraginaceae
<i>Olearia crebra</i> E.K.Cameron et Heenan <sup>CD, RR</sup>	Asteraceae

<i>Olearia hectorii</i> Hook.f.	CD, De, RF	Asteraceae
<i>Olearia polita</i> H.D. Wilson et Garn. -Jones	CD, RR	Asteraceae
† <i>Picris burbridgeae</i> S.Holzappel	EF, PD, SO, Sp	Asteraceae
<i>Pittosporum serpentinum</i> (de Lange)	OL	Pittosporaceae
† <i>Plumatochilos tasmanicum</i> (D.L.Jones) Szlachetko	EF, PD, SO	Orchidaceae
† <i>Pomaderris phyllicifolia</i> Lodd. subsp. <i>phyllicifolia</i>	SO	Rhamnaceae
<i>Pterostylis irwinii</i> D.L.Jones, Molloy et M.A.Clem.	DF, EF, Sp	Orchidaceae
† <i>Ranunculus acraeus</i> Heenan et P.J.Lockhart	DP	Ranunculaceae
† <i>Schoenus carsei</i> Cheeseman	DF, RR, SO, Sp	Cyperaceae
† <i>Todea barbara</i> (L.) T.Moore	SO	Osmundaceae
<i>Uncinia strictissima</i> (Kük.) Petrie	DP	Cyperaceae
† <i>Utricularia australis</i> R.Br.	RR, SO	Lentibulariaceae

### 3. Nationally Vulnerable (44)

Nationally Vulnerable taxa are those which fit the criteria as defined by Townsend et al. (2008) These include: “Nationally Vulnerable A”—small, increasing population (unnatural); “Nationally Vulnerable B”—moderate, stable population (unnatural); “Nationally Vulnerable C”—moderate population, with population trend that is declining; “Nationally Vulnerable D”—moderate to large population and moderate to high ongoing or predicted decline; or “Nationally Vulnerable D”—large population and high ongoing or predicted decline.

<i>Aciphylla dieffenbachii</i> (F.Muell.) Kirk	CD, EF, IE, RR	Apiaceae
<i>Alectryon excelsus</i> subsp. <i>grandis</i> (Cheeseman) de Lange et E.K.Cameron	IE, Inc, OL	Sapindaceae
† <i>Anogramma leptophylla</i> (L.) Link	EF, RR, SO, Sp	Pteridaceae
<i>Atriplex hollowayi</i> de Lange et D.A.Norton	CD, EF, Inc, OL	Chenopodiaceae
<i>Australopyrum calcis</i> subsp. <i>optatum</i> Connor et Molloy	RR	Poaceae
<i>Baumea complanata</i> (Berggr.) S.T.Blake	RF	Cyperaceae
<i>Carex cirrhosa</i> Berggr.		Cyperaceae
<i>Carex rubicunda</i> Petrie	DP	Cyperaceae
<i>Carmichaelia astonii</i> G.Simpson	RF	Fabaceae
<i>Carmichaelia crassicaulis</i> subsp. <i>racemosa</i> (Kirk) Heenan	DF, RF	Fabaceae
<i>Carmichaelia juncea</i> Hook.f.	CD, EF, RF	Fabaceae
<i>Clematis marmoraria</i> Sneddon	CD, RR	Ranunculaceae
<i>Crassula manaia</i> A.P.Druce et Sykes	DF, EF, RR, Sp	Crassulaceae
<i>Dactylanthus taylorii</i> Hook.f.	CD, PD, RF, Sp	Balanophoraceae
†† <i>Dichelachne micrantha</i> (Cav.) Domin	DF, SO, Sp	Poaceae
† <i>Drosera pygmaea</i> DC.	DF, SO	Droseraceae
†† <i>Geranium retrorsum</i> DC.	DF, SO	Geraniaceae
<i>Gratiola concinna</i> Colenso	De	Plantaginaceae
<i>Hebe bishopiana</i> (Petrie) Hatch	RR, Sp	Plantaginaceae
<i>Hebe speciosa</i> (A.Cunn.) Cockayne et Allan		Plantaginaceae
<i>Iphigenia novae-zelandiae</i> (Hook.f.) Baker	DF, RR	Colchicaceae
† <i>Isolepis fluitans</i> (L.) R.Br. var. <i>fluitans</i>	DF, SO	Cyperaceae
† <i>Kirkianella novae-zelandiae</i> (Hook.f.) Allan	DP	Asteraceae
<i>Lepidium flexicaule</i> Kirk	CD, EF	Brassicaceae
<i>Lepidium naufragorum</i> Garn. -Jones et D.A.Norton	CD, RR	Brassicaceae
<i>Lepidium oleraceum</i> Sparrm.	CD, EF, RR, Sp	Brassicaceae
<i>Leucogenes tarahaoa</i> Molloy	DF, OL	Asteraceae
<i>Libertia peregrinans</i> Cockayne et Allan	DP	Iridaceae
† <i>Lycopodiella serpentina</i> (Kunze) B.Øllg.	PD, RR, TO	Lycopodiaceae
<i>Mazus novaezeelandiae</i> subsp. <i>impolitus</i> Heenan f. <i>impolitus</i>	DP	Phrymaceae
<i>Myosotidium hortensia</i> (Decne.) Baill.	CD, IE, Inc, RR	Boraginaceae
<i>Myosotis pygmaea</i> var. <i>glauca</i> G.Simpson et J.S.Thomson	De, DR, SP	Boraginaceae
<i>Olearia fimbriata</i> Heads	PD, RF	Asteraceae
† <i>Olearia telmatica</i> Heenan et de Lange	CD, DF, IE, RF	Asteraceae
<i>Olearia traversiorum</i> (F.Muell.) Hook.f.	CD, DF, IE, RF	Asteraceae
<i>Pachycladon cheesemanii</i> Heenan et A.D.Mitch.	Sp	Brassicaceae
<i>Pimelea tomentosa</i> (J.R.Forst. et G.Forst.) Druce	PD	Thymelaeaceae
<i>Pittosporum dallii</i> Cheeseman	CD, RR	Pittosporaceae
<i>Pittosporum obcordatum</i> Raoul	CD, PD	Pittosporaceae
<i>Pittosporum turneri</i> Petrie	CD, Inc, PD	Pittosporaceae



## APPENDIX 1 (continued)

<i>Rorippa divaricata</i> (Hook.f.) Garn.-Jones et Jonsell	EF	Brassicaceae
† <i>Rytidosperma telmaticum</i> Connor et Molloy	DR, EF, RR	Poaceae
† <i>Spiranthes novae-zelandiae</i> Hook.f.	DR, Sp	Orchidaceae
<i>Trithuria inconspicua</i> Cheeseman	RR	Hydatellaceae

## At Risk (651)

At Risk taxa are those which meet the criteria specified by Townsend et al. (2008) for 1. Declining, 2. Recovering, 3. Relict, and 4. Naturally Uncommon.

## 1. Declining (83)

Declining taxa are those which fit the criteria as defined by Townsend et al. (2008). These include “Declining A”—moderate to large population and low ongoing or predicted decline; “Declining B”—large population and low to moderate ongoing or predicted decline; and “Declining C”—very large population and low to high ongoing or predicted decline.

<i>Aciphylla subflabellata</i> W.R.B.Oliv.	DR, Sp	Apiaceae
<i>Alepis flavida</i> (Hook.f.) Tiegh.	CD	Loranthaceae
<i>Anemanthele lessoniana</i> (Steud.) Veldkamp	DP	Poaceae
† <i>Anisotome patula</i> (Kirk) Cockayne	DP	Apiaceae
† <i>Austrofestuca littoralis</i> (Labill.) E.B.Alexeev	SO	Poaceae
<i>Brachyglottis kirkii</i> (Kirk) C.J.Webb var. <i>kirkii</i>	DP	Asteraceae
<i>Brachyglottis sciadophila</i> (Raoul) B.Nord.	DP	Asteraceae
<i>Carex carsei</i> Petrie	DP	Cyperaceae
<i>Carex litorosa</i> L.H.Bailey		Cyperaceae
<i>Carex tenuiculmis</i> (Petrie) Heenan et de Lange	DP	Cyperaceae
<i>Carmichaelia compacta</i> Petrie	DR, RF, RR	Fabaceae
<i>Carmichaelia crassicaulis</i> Hook.f. subsp. <i>crassicaulis</i> Hook.f.	RF	Fabaceae
<i>Carmichaelia kirkii</i> Hook.f.	RF	Fabaceae
<i>Carmichaelia vexillata</i> Heenan	RF	Fabaceae
<i>Chionochloa juncea</i> Zotov	RR	Poaceae
<i>Convolvulus verecundus</i> Allan	DP	Convolvulaceae
† <i>Coprosma acerosa</i> A.Cunn.	DP	Rubiaceae
<i>Coprosma obconica</i> Kirk	RR	Rubiaceae
<i>Coprosma pedicellata</i> Molloy, de Lange et B.D.Clarkson	CD, PD, RR	Rubiaceae
<i>Coprosma wallii</i> Petrie	CD, RF	Rubiaceae
† <i>Cyclosorus interruptus</i> (Willd.) H.Ito	SO	Thelypteridaceae
† <i>Cyperus insularis</i> Heenan et de Lange		Cyperaceae
† <i>Deschampsia cespitosa</i> (L.) P.Beauv.	CD, SO	Poaceae
<i>Dianella haemata</i> Heenan et de Lange	DP	Hemerocallidaceae
<i>Dracophyllum densum</i> W.R.B.Oliv.	RR	Ericaceae
<i>Eleocharis neozelandica</i> C.B.Clarke ex Kirk	DR, EF	Cyperaceae
<i>Elymus tenuis</i> (Buchanan) Á.Löve and Connor	DP	Poaceae
† <i>Epilobium insulare</i> Hausskn.	DR, RR	Onagraceae
† <i>Eryngium vesiculosum</i>	DR, SO, Sp	Apiaceae
<i>Euphorbia glauca</i> G.Forst.	CD	Euphorbiaceae
† <i>Geranium sessiliflorum</i> var. <i>arenarium</i> G.Simpson	DR, RR	Geraniaceae
<i>Gunnera arenaria</i> Cheeseman	DP	Gunneraceae
<i>Helichrysum dimorphum</i> Cockayne	Sp	Asteraceae
<i>Heliohebe acuta</i> Garn.-Jones	DP, RR	Plantaginaceae
<i>Heliohebe lavaudiana</i> (Raoul) Garn.-Jones	OL	Plantaginaceae
†† <i>Juncus pauciflorus</i> R.Br.	DR, SO, Sp	Juncaceae
<i>Kunzea ericoides</i> var. <i>linearis</i> (Kirk) W.Harris		Myrtaceae
<i>Lepidium tenuicaule</i> Kirk		Brassicaceae
<i>Leptinella tenella</i> (A.Cunn.) D.G.Lloyd et C.J.Webb	DR, RR, Sp	Asteraceae
† <i>Leucopogon nanum</i> M.I.Dawson et Heenan	DP	Ericaceae
† <i>Lobelia fatiscens</i> Heenan		Lobeliaceae
† <i>Lobelia ionantha</i> Heenan	DP	Lobeliaceae
<i>Luzula celata</i> Edgar		Juncaceae
† <i>Ptisana salicina</i> (J.E.Sm.) Murdock	SO	Marattiaceae

<i>Mazus novaezeelandiae</i> W.R.Barker subsp. <i>novaezeelandiae</i> DP	Phrymaceae
<i>Meliccytus crassifolius</i> (Hook.f.) F.Muell.	Violaceae
<i>Meliccytus flexuosus</i> Molloy et A.P.Druce CD, RF	Violaceae
<i>Montigena novae-zelandiae</i> (Hook.f.) Heenan RF, Sp	Fabaceae
<i>Muehlenbeckia ephedroides</i> Hook.f. PD, Sp	Polygonaceae
<i>Myosotis pygmaea</i> Colenso var. <i>pygmaea</i> Sp	Boraginaceae
<i>Myriophyllum robustum</i> Hook.f. EF, Sp	Haloragaceae
<i>Myrsine coxii</i> Cockayne DE, IE, RF	Violaceae
† <i>Nephrolepis flexuosa</i> Colenso RR, SO	Nephrolepidaceae
<i>Olearia chathamica</i> Kirk IE, PD	Asteraceae
<i>Olearia fragrantissima</i> Petrie CD, PD	Asteraceae
<i>Olearia lineata</i> (Kirk) Cockayne PD, RF	Asteraceae
† <i>Paspalum orbiculare</i> G.Forst. DP, SO	Poaceae
<i>Peraxilla colensoi</i> (Hook.f.) Tiegh. CD	Loranthaceae
<i>Peraxilla tetrapetala</i> (L.f.) Tiegh. CD	Loranthaceae
<i>Pimelea arenaria</i> A.Cunn. PD, RF	Thymelaeaceae
† <i>Pimelea aridula</i> Cockayne DP	Thymelaeaceae
<i>Pimelea microphylla</i> Colenso RR, SP	Thymelaeaceae
† <i>Pimelea pulvinaris</i> C.J.Burrows DP	Thymelaeaceae
<i>Pittosporum kirkii</i> Hook.f. DP	Pittosporaceae
<i>Pterostylis paludosa</i> D.L.Jones, Molloy et M.A.Clem.	Orchidaceae
<i>Rachelia glaria</i> J.M.Ward et Breitw. RR, Sp	Asteraceae
<i>Ranunculus brevis</i> Garn.-Jones DP	Ranunculaceae
† <i>Ranunculus haastii</i> Hook.f. DE, DP, EF, RF	Ranunculaceae
<i>Ranunculus limosella</i> Kirk DP	Ranunculaceae
<i>Ranunculus pilifera</i> (F.J.F.Fisher) Heenan et P.J.Lockhart DP	Ranunculaceae
<i>Ranunculus recens</i> Kirk St, Sp	Ranunculaceae
<i>Raoulia monroi</i> Hook.f. DP	Asteraceae
<i>Scandia rosifolia</i> (Hook.) J.W.Dawson DP	Apiaceae
† <i>Schoenus fluitans</i> Hook.f. PD, RR, SO, Sp	Cyperaceae
<i>Selliera rotundifolia</i> Heenan	Goodeniaceae
†† <i>Solanum aviculare</i> G.Forst.var. <i>aviculare</i> DP, Sp, TO	Solanaceae
<i>Tetrachondra hamiltonii</i> Petrie ex W.R.B.Oliv. DP, Sp	Tetrachondraceae
<i>Teuclidium parvifolium</i> Hook.f. Sp	Verbenaceae
† <i>Thelypteris confluens</i> (Thunb.) C.V.Morton TO	Thelypteridaceae
<i>Traversia baccharoides</i> Hook.f. EF	Asteraceae
<i>Trisetum antarcticum</i> (G.Forst.) Trin.	Poaceae
<i>Tupeia antarctica</i> (G.Forst.) Cham. et Schltld. CD	Loranthaceae
<i>Urtica linearifolia</i> (Hook.f.) Cockayne Sp	Urticaceae

## 2. Recovering (6)

Taxa that have undergone a documented decline within the last 1000 years and now have an ongoing or predicted increase of >10% in the total population or area of occupancy, taken over the next 10 years or three generations, whichever is longer. Note that such taxa that are increasing but have a population size of <1000 mature individuals (or total area of occupancy of <10 ha) are listed in one of the Threatened categories, depending on their population size (for more details see Townsend et al. 2008).

<i>Aciphylla traversii</i> (F.Muell.) Hook.f. CD, EF, IE, RR	Apiaceae
<i>Astelia chathamica</i> (Skotts.) L.B.Moore IE, RR	Asteliaceae
<i>Embergeria grandifolia</i> (Kirk) Boulos CD, EF, IE, RR	Asteraceae
<i>Plagianthus regius</i> subsp. <i>chathamicus</i> (Cockayne) de Lange CD, IE	Malvaceae
<i>Ranunculus godleyanus</i> Hook.f. CD, RR	Ranunculaceae
<i>Stilbocarpa lyallii</i> J.B.Armstr. DP	Araliaceae

## 3. Relict (20)

Taxa that have undergone a documented decline within the last 1000 years, and now occupy <10% of their former range and meet one of the following criteria: A, have 5000–20 000 mature individuals and are stable ( $\pm 10\%$ ); B, have >20 000 mature individuals and are stable or increasing at >10%. The range of a relictual taxon takes into account the area currently occupied as a ratio of its former extent. Relict can also include taxa that exist as reintroduced and self-sustaining populations within or outside their former known range (for more details see Townsend et al. 2008).

## APPENDIX 1 (continued)

† <i>Adiantum formosum</i> R.Br.	RR, SO	Pteridaceae
† <i>Arthropodium bifurcatum</i> Heenan, A.D.Mitch. et de Lange	PD	Laxmanniaceae
† <i>Atriplex australasica</i> Moq.	RR, SO	Chenopodiaceae
† <i>Atriplex billardierei</i> (Moq.) Hook.f.	EF, TO	Chenopodiaceae
<i>Carmichaelia williamsii</i> Kirk	PD	Fabaceae
<i>Colensoa physaloides</i> (A.M.Cunn.) Hemsl.	PD	Lobeliaceae
<i>Coprosma intertexta</i> G.Simpson	D <sub>e</sub> , DP, RF, Sp	Rubiaceae
<i>Desmoschoenus spiralis</i> (A.Rich.) Hook.f.	CD, Inc, Sp	Cyperaceae
<i>Lagenifera lanata</i> A.Cunn.	Sp	Asteraceae
<i>Leptinella featherstonii</i> F.Muell.	CD, IE, RR	Asteraceae
<i>Myrsine aquilonia</i> Heenan et de Lange	PD	Myrsinaceae
† <i>Pellaea falcata</i> (R.Br.) Fée	DP, SO	Pteridaceae
† <i>Pisonia brunoniana</i> Endl.	TO	Nyctaginaceae
<i>Prasophyllum hectorii</i> (Buchanan) Molloy, D.L.Jones et M.A.Clem.	CD, EF	Orchidaceae
<i>Senecio radiolatus</i> F.Muell. subsp. <i>radiolatus</i>	IE, RR, Sp	Asteraceae
<i>Senecio sterquilimus</i> Ormduff	RR	Asteraceae
<i>Sonchus kirkii</i> Hamlin		Asteraceae
<i>Sporadanthus ferrugineus</i> de Lange, Heenan et B.D.Clarkson	CD, D <sub>e</sub> , RR	Restionaceae
<i>Strebilus banksii</i> (Cheeseman) C.J.Webb	Sp	Moraceae
<i>Utricularia delicatula</i> Cheeseman	DP, RR, Sp	Lentibulariaceae

## 4. Naturally Uncommon (542)

Taxa whose distribution is naturally confined to specific substrates (e.g., ultramafic rock), habitats (e.g., high alpine fellfield, hydrothermal vents), or geographic areas (e.g., subantarctic islands, seamounts), or taxa that occur within naturally small and widely scattered populations. This distribution is not the result of past or recent human disturbance. Populations may be stable or increasing. Note that a naturally uncommon taxon that has <250 mature individuals qualifies for Nationally Critical. Taxa that have >20 000 mature individuals are not considered Naturally Uncommon, unless they occupy an area of <100 000 ha (1000 km<sup>2</sup>).

<i>Abrotanella muscosa</i> Kirk	RR	Asteraceae
<i>Abrotanella patearoa</i> Heads	Sp	Asteraceae
<i>Abrotanella rostrata</i> Swenson	RR	Asteraceae
<i>Abrotanella rosulata</i> (Hook.f.) Hook.f.	RR	Asteraceae
<i>Abrotanella spathulata</i> (Hook.f.) Hook.f.	RR	Asteraceae
† <i>Acaena emittens</i> B.H.Macmill.	Sp	Rosaceae
<i>Acaena microphylla</i> var. <i>pauciglochidiata</i> Bitter	Sp	Rosaceae
† <i>Acaena minor</i> var. <i>antarctica</i> (Cockayne) Allan	RR	Rosaceae
† <i>Acaena minor</i> (Hook.f.) Allan var. <i>minor</i>	RR, SO	Rosaceae
<i>Acaena tesca</i> B.H.Macmill.	Sp	Rosaceae
<i>Achnatherum petriei</i> (Buchanan) S.W.L.Jacobs et J.Everett	EF, Sp	Poaceae
<i>Aciphylla cartilaginea</i> Petrie	RR	Apiaceae
<i>Aciphylla congesta</i> Cheeseman	RR	Apiaceae
<i>Aciphylla crosby-smithii</i> Petrie	RR	Apiaceae
<i>Aciphylla dissecta</i> (Kirk) W.R.B.Oliv.	RR	Apiaceae
<i>Aciphylla lecomtei</i> J.W.Dawson	Sp	Apiaceae
<i>Aciphylla leighii</i> Allan	RR	Apiaceae
<i>Aciphylla montana</i> var. <i>gracilis</i> (W.R.B.Oliv.) J.W.Dawson	DP, RR	Apiaceae
<i>Aciphylla multisecta</i> Cheeseman	RR	Apiaceae
<i>Aciphylla spedenii</i> Cheeseman	RR	Apiaceae
<i>Aciphylla squarrosa</i> var. <i>flaccida</i> Kirk	RR	Apiaceae
<i>Aciphylla stannensis</i> J.W.Dawson	RR	Apiaceae
<i>Aciphylla takahea</i> W.R.B.Oliv.	RR	Apiaceae
<i>Aciphylla trailii</i> Kirk	RR	Apiaceae
<i>Aciphylla trifoliolata</i> Petrie	DP, RR	Apiaceae
<i>Adelopetalum tuberculatum</i> (Colenso) D.L.Jones, M.A.Clem. et Molloy	Sp	Orchidaceae
<i>Agrostis imbecilla</i> Zotov	DP, Sp	Poaceae
<i>Agrostis oresbia</i> Edgar	DP, Sp	Poaceae
† <i>Agrostis petriei</i> Hack.	DP, Sp	Poaceae
<i>Agrostis subulata</i> Hook.f.	RR	Poaceae

<i>Anemone tenuicaulis</i> (Cheeseman) Parkin et Sledge	Sp	Ranunculaceae
<i>Anisotome acutifolia</i> (Kirk) Cockayne	IE, OL	Apiaceae
<i>Anisotome antipoda</i> Hook.f.	RR	Apiaceae
† <i>Anisotome caudicola</i> J.W.Dawson	Sp	Apiaceae
<i>Anisotome latifolia</i> Hook.f.	IE, OL	Apiaceae
<i>Anisotome lyallii</i> Hook.f.	Sp	Apiaceae
<i>Anzybas rotundifolius</i> (Hook.f.) D.L.Jones et M.A.Clem.	EF, Sp	Orchidaceae
<i>Apium prostratum</i> subsp. <i>denticulatum</i> P.S.Short	RR	Apiaceae
† <i>Arachniodes aristata</i> (G.Forst.) Tindale	OL, SO	Dryopteridaceae
† <i>Argyrotegium nitidulum</i> (Hook.f.) J.M.Ward et Breiwt.	RR, TO	Asteraceae
<i>Ascarina lucida</i> var. <i>lanceolata</i> (Hook.f.) Allan	IE, OL	Chloranthaceae
<i>Asplenium chathamense</i> Brownsey	IE	Aspleniaceae
<i>Asplenium cimmeriorum</i> Brownsey et de Lange	RR, Sp	Aspleniaceae
<i>Asplenium scleroprium</i> Hombr.	Sp	Aspleniaceae
† <i>Asplenium shuttleworthianum</i> Kunze	RR, SO, Sp	Aspleniaceae
<i>Atriplex buchananii</i> (Kirk) Cheeseman	Sp	Chenopodiaceae
† <i>Australopyrum enysii</i> (Kirk) Connor	Sp	Poaceae
† <i>Blechnum norfolkianum</i> (Heward) C.Chr.	Sp, TO	Blechnaceae
<i>Boehmeria australis</i> subsp. <i>dealbata</i> (Cheeseman) Sykes	EF, IE, Inc, OL	Urticaceae
† <i>Botrychium australe</i> R.Br.	DP, PD, SO, Sp	Sphioglossaceae
<i>Brachyglottis arborescens</i> W.R.B.Oliv.	IE, OL, Sp	Asteraceae
<i>Brachyglottis bifistulosa</i> (Hook.f.) B.Nord.	Sp	Asteraceae
<i>Brachyglottis compacta</i> (Kirk) B.Nord.	RR	Asteraceae
† <i>Brachyglottis greyi</i> (Hook.f.) B.Nord.	Sp	Asteraceae
<i>Brachyglottis myrianthos</i> (Cheeseman) D.G.Drury	Sp	Asteraceae
<i>Brachyglottis pentacopa</i> (D.G.Drury) B.Nord.	RR	Asteraceae
<i>Brachyglottis perdicioides</i> (Hook.f.) B.Nord.	Sp	Asteraceae
<i>Brachyglottis stewartiae</i> (J.B.Armstr.) B.Nord.	RR, Sp	Asteraceae
<i>Brachyglottis traversii</i> (F.Muell.) B.Nord.	Sp	Asteraceae
<i>Brachyglottis turneri</i> (Cheeseman) C.J.Webb	RR, Sp	Asteraceae
<i>Brachyscome linearis</i> (Petrie) Druce	Sp	Asteraceae
<i>Bulbinella gibbsii</i> var. <i>gibbsii</i> Cockayne	RR	Asphodelaceae
<i>Bulbinella modesta</i> L.B.Moore	Sp	Asphodelaceae
<i>Bulbinella rossii</i> (Hook.f.) Cheeseman	RR	Asphodelaceae
<i>Bulbinella talbotii</i> L.B.Moore	RR, Sp	Asphodelaceae
† <i>Callitriche antarctica</i> Hegelm.	RR, SO	Plantaginaceae
<i>Callitriche aucklandica</i> R.Mason	IE, RR, Sp	Plantaginaceae
<i>Callitriche petriei</i> subsp. <i>chathamensis</i> R.Mason	IE, RR, Sp	Plantaginaceae
† <i>Calochilus paludosus</i> R.Br.	EF, PD, RR, SO, Sp	Orchidaceae
† <i>Calochilus robertsonii</i> Benth.	EF, SO, Sp	Orchidaceae
† <i>Calystegia marginata</i> R.Br.	SO, Sp	Convolvulaceae
† <i>Canavalia rosea</i> (Sw.) DC.	OL, SO	Fabaceae
<i>Cardamine bilobata</i> Kirk	Sp	Brassicaceae
<i>Cardamine lacustris</i> (Garn.-Jones et P.N.Johnson) Heenan	RR, Sp	Brassicaceae
<i>Cardamine latior</i> Heenan	IE, OL	Brassicaceae
<i>Cardamine subcarnosa</i> (Hook.f.) Allan	IE, OL	Brassicaceae
<i>Carex allanii</i> Hamlin	Dp, Sp	Cyperaceae
<i>Carex astonii</i> Hamlin	RR, Sp	Cyperaceae
<i>Carex berggrenii</i> Petrie	Sp	Cyperaceae
<i>Carex calcis</i> K.A.Ford	RR, Sp	Cyperaceae
† <i>Carex capillacea</i> Boott	SO, Sp	Cyperaceae
<i>Carex chathamica</i> C.B.Clarke	IE, RR, Sp	Cyperaceae
<i>Carex cremnicola</i> K.A.Ford	RR, Sp	Cyperaceae
† <i>Carex dallii</i> Kirk	Dp	Cyperaceae
<i>Carex decurtata</i> Cheeseman	Sp	Cyperaceae
<i>Carex devia</i> Cheeseman	RR	Cyperaceae
<i>Carex druceana</i> Hamlin	Sp	Cyperaceae
<i>Carex edgariae</i> Hamlin	Sp	Cyperaceae
<i>Carex elingamita</i> Hamlin	IE, OL	Cyperaceae
<i>Carex enysii</i> Petrie	Sp	Cyperaceae

## APPENDIX 1 (continued)

<i>Carex filamentosa</i> Petrie RR, Sp	Cyperaceae
<i>Carex fretalis</i> Hamlin Sp	Cyperaceae
<i>Carex impexa</i> K.A.Ford RR	Cyperaceae
<i>Carex kermadecensis</i> Petrie IE, RR	Cyperaceae
<i>Carex lachenalii</i> subsp. <i>parkeri</i> (Petrie) Toivonen RR, Sp	Cyperaceae
<i>Carex ophiolithica</i> de Lange et Heenan OL	Cyperaceae
<i>Carex pleiostachys</i> C.B.Clarke RR, Sp	Cyperaceae
<i>Carex pterocarpa</i> Petrie RR, Sp	Cyperaceae
<i>Carex trachycarpa</i> Cheeseman RR, Sp	Cyperaceae
<i>Carex traversii</i> Kirk RR	Cyperaceae
<i>Carex ventosa</i> C.B.Clarke IE, RR	Cyperaceae
<i>Carmichaelia appressa</i> G.Simpson CD, RF, RR	Fabaceae
<i>Cassinia amoena</i> Cheeseman OL	Asteraceae
<i>Celmisia adamsii</i> Kirk var. <i>adamsii</i> Sp	Asteraceae
<i>Celmisia adamsii</i> var. <i>rugosula</i> Cheeseman RR	Asteraceae
<i>Celmisia clavata</i> G.Simpson et J.S.Thomson RR	Asteraceae
<i>Celmisia cockayneana</i> Petrie Sp	Asteraceae
<i>Celmisia cordatifolia</i> Buchanan var. <i>cordatifolia</i> Sp	Asteraceae
<i>Celmisia gibbsii</i> Cheeseman Sp	Asteraceae
<i>Celmisia glandulosa</i> var. <i>latifolia</i> Cockayne RR	Asteraceae
<i>Celmisia hookeri</i> Cockayne Sp	Asteraceae
<i>Celmisia inaccessa</i> Given DF, RR, Sp	Asteraceae
<i>Celmisia insignis</i> W.Martin RR	Asteraceae
<i>Celmisia lindsayi</i> Hook.f. RR, Sp	Asteraceae
<i>Celmisia mackauti</i> Raoul OL	Asteraceae
<i>Celmisia macmahonii</i> var. <i>hadfieldii</i> W.Martin RR	Asteraceae
<i>Celmisia macmahonii</i> Kirk var. <i>macmahonii</i> OL	Asteraceae
<i>Celmisia major</i> var. <i>brevis</i> Allan OL	Asteraceae
<i>Celmisia major</i> Cheeseman var. <i>major</i> PD, Sp	Asteraceae
<i>Celmisia markii</i> W.G.Lee et Given RR	Asteraceae
<i>Celmisia morgani</i> Cheeseman RR	Asteraceae
<i>Celmisia philocremna</i> Given RR, Sp	Asteraceae
<i>Celmisia polyvena</i> G.Simpson et J.S.Thomson IE, RR	Asteraceae
<i>Celmisia rigida</i> (Kirk) Cockayne IE, Sp	Asteraceae
† <i>Celmisia rupestris</i> Cheeseman Sp	Asteraceae
<i>Celmisia rutlandii</i> Kirk Sp	Asteraceae
<i>Celmisia spectabilis</i> subsp. <i>lanceolata</i> (Hook.f.) Given Sp	Asteraceae
<i>Celmisia spedenii</i> G.Simpson RR	Asteraceae
<i>Celmisia thomsonii</i> Cheeseman RR, Sp	Asteraceae
† <i>Cenchrus caliculatus</i> Cav. OL, TO	Poaceae
<i>Centipeda aotearoana</i> N.G.Walsh Sp	Asteraceae
<i>Centrolepis minima</i> Kirk Sp	Centrolepidaceae
† <i>Centrolepis strigosa</i> (R.Br.) Roem. et Schult. DF, SO, Sp	Centrolepidaceae
<i>Chionochoa antarctica</i> (Hook.f.) Zotov RR	Poaceae
<i>Chionochoa beddiei</i> Zotov PD, RR, Sp	Poaceae
<i>Chionochoa bromoides</i> (Hook.f.) Zotov RR, Sp	Poaceae
<i>Chionochoa crassiuscula</i> (Kirk) Zotov subsp. <i>crassiuscula</i> RR	Poaceae
<i>Chionochoa crassiuscula</i> subsp. <i>directa</i> Connor RR	Poaceae
<i>Chionochoa defracta</i> Connor RR	Poaceae
<i>Chionochoa flavicans</i> f. <i>temata</i> Connor OL	Poaceae
<i>Chionochoa lanea</i> Connor RR	Poaceae
<i>Chionochoa nivifera</i> Connor et K.M.Lloyd RR	Poaceae
<i>Chionochoa rubra</i> subsp. <i>rubra</i> var. <i>inermis</i> Connor OL	Poaceae
<i>Chionochoa spiralis</i> Zotov PD, RR	Poaceae
<i>Chionochoa vireta</i> Connor Sp	Poaceae
<i>Chionohebe glabra</i> (Cheeseman) Heads RR, Sp	Plantaginaceae
<i>Clematis petriei</i> Allan Sp	Ranunculaceae
<i>Colobanthus brevisepalus</i> Kirk PD, Sp	Caryophyllaceae
<i>Colobanthus hookeri</i> Cheeseman RR	Caryophyllaceae

<i>Colobanthus squarrosus</i> subsp. <i>drucei</i> B.V.Sneddon <sup>RR</sup>	Caryophyllaceae
<i>Colobanthus squarrosus</i> Cheeseman subsp. <i>squarrosus</i> <sup>RR</sup>	Caryophyllaceae
<i>Convolvulus fractosaxosa</i> Petrie <sup>Sp</sup>	Convolvulaceae
<i>Coprosma acutifolia</i> Hook.f. <sup>IE, OL</sup>	Rubiaceae
<i>Coprosma chathamica</i> Cockayne <sup>IE, RR</sup>	Rubiaceae
<i>Coprosma distantia</i> (de Lange et R.O.Gardner) de Lange <sup>OL</sup>	Rubiaceae
† <i>Coprosma macrocarpa</i> Cheeseman subsp. <i>macrocarpa</i> <sup>IE, OL</sup>	Rubiaceae
<i>Coprosma neglecta</i> Cheeseman <sup>RR</sup>	Rubiaceae
† <i>Coprosma perpusilla</i> subsp. <i>subantarctica</i> Orchard <sup>RR, SO, Sp</sup>	Rubiaceae
† <i>Coprosma petiolata</i> Hook.f. <sup>IE</sup>	Rubiaceae
† <i>Coprosma propinqua</i> var. <i>martinii</i> W.R.B.Oliv. <sup>IE</sup>	Rubiaceae
<i>Coprosma spatulata</i> subsp. <i>hikuruana</i> de Lange et Heenan <sup>OL</sup>	Rubiaceae
† <i>Cordylone obtecta</i> (Graham) Baker <sup>RR, SO, Sp</sup>	Laxmanniaceae
† <i>Coriaria arborea</i> var. <i>keradecensis</i> W.R.B.Oliv. <sup>IE, OL</sup>	Coriariaceae
<i>Coriaria pottsiana</i> W.R.B.Oliv. <sup>RR, Sp</sup>	Coriariaceae
<i>Corokia macrocarpa</i> Kirk <sup>IE, RR</sup>	Argophyllaceae
† <i>Corunastylis nuda</i> (Hook.f.) D.L.Jones et M.A.Clem. <sup>EF, SO, Sp</sup>	Orchidaceae
<i>Corunastylis pumila</i> (Hook.f.) D.L.Jones et M.A.Clem. <sup>EF, Sp</sup>	Orchidaceae
<i>Craspedia robusta</i> var. <i>pedicellata</i> (Kirk) Allan <sup>RR, Sp</sup>	Asteraceae
† <i>Craspedia uniflora</i> var. <i>maritima</i> Allan <sup>DP, RR, Sp</sup>	Asteraceae
† <i>Crassula helmsii</i> (Kirk) Cockayne <sup>SO, Sp</sup>	Crassulaceae
<i>Crassula kirkii</i> (Allan) A.P.Druce et Given <sup>Sp</sup>	Crassulaceae
<i>Crassula mataikona</i> A.P.Druce <sup>Sp</sup>	Crassulaceae
<i>Crassula ruamahanga</i> (A.P.Druce) emend. de Lange et Heenan <sup>Sp</sup>	Crassulaceae
<i>Cyathea kermadecensis</i> W.R.B.Oliv. <sup>IE, OL</sup>	Cyatheaceae
<i>Cyathea milnei</i> Hook. ex Hook.f. <sup>IE, OL</sup>	Cyatheaceae
<i>Dannamania vernicosa</i> (Hook.f.) Given <sup>RR</sup>	Asteraceae
<i>Danhatchia australis</i> (Hatch) Garay et Christenson <sup>Sp</sup>	Orchidaceae
<i>Davallia tasmanii</i> Field subsp. <i>tasmanii</i> <sup>IE</sup>	Davalliaceae
<i>Deschampsia pusilla</i> Petrie <sup>Sp</sup>	Poaceae
<i>Deyeuxia youngii</i> (Hook.f.) Buchanan <sup>Sp</sup>	Poaceae
†† <i>Dichelachne inaequiglumis</i> (Hack.) Edgar et Connor <sup>DP, SO, Sp</sup>	Poaceae
† <i>Dicranopteris linearis</i> (Burm.f.) Underw. <sup>RR, SO</sup>	Gleicheniaceae
<i>Disphyma australe</i> subsp. <i>stricticaule</i> Chinnock <sup>IE, RR</sup>	Aizoaceae
<i>Disphyma papillatum</i> Chinnock <sup>IE, RR</sup>	Aizoaceae
<i>Doodia milnei</i> Carruth. in Seem. <sup>IE, RR</sup>	Blechnaceae
<i>Doodia mollis</i> Parris <sup>Sp</sup>	Blechnaceae
<i>Doodia squarrosa</i> Colenso <sup>Sp</sup>	Blechnaceae
<i>Dracophyllum arboreum</i> Cockayne <sup>IE, Inc</sup>	Ericaceae
† <i>Dracophyllum longifolium</i> var. <i>cockayneanum</i> (Du Rietz) W.R.B.Oliv. <sup>IE, OL</sup>	Ericaceae
<i>Dracophyllum marmoricola</i> S.Venter <sup>RR</sup>	Ericaceae
<i>Dracophyllum ophioliticum</i> S.Venter <sup>OL</sup>	Ericaceae
<i>Dracophyllum patens</i> W.R.B.Oliv. <sup>RR</sup>	Ericaceae
<i>Dracophyllum pearsonii</i> Kirk <sup>Sp</sup>	Ericaceae
<i>Dracophyllum scoparium</i> Hook.f. <sup>RR</sup>	Ericaceae
<i>Dracophyllum trimorphum</i> W.R.B.Oliv. <sup>DP, RR, Sp</sup>	Ericaceae
<i>Dracophyllum uniflorum</i> var. <i>frodosum</i> G.Simpson <sup>Sp</sup>	Ericaceae
<i>Dracophyllum urvilleanum</i> A.Rich. <sup>PD</sup>	Ericaceae
<i>Drymoanthus flavus</i> St. George et Molloy <sup>PD, Sp</sup>	Orchidaceae
† <i>Einadia allanii</i> (Aellen) Paul G.Wilson <sup>DP, Sp</sup>	Chenopodiaceae
<i>Elingamita johnsonii</i> G.T.S.Baylis <sup>IE, OL</sup>	Myrsinaceae
<i>Elymus apricus</i> Å.Löve and Connor <sup>Sp</sup>	Poaceae
<i>Elymus falcis</i> Connor <sup>Sp</sup>	Poaceae
<i>Elymus sacandros</i> Connor <sup>DP, RR, Sp</sup>	Poaceae
<i>Epacris sinclairii</i> Hook.f. <sup>RR</sup>	Ericaceae
<i>Epilobium astonii</i> (Allan) P.H.Raven et Engelhorn <sup>RR</sup>	Onagraceae
<i>Epilobium brevipes</i> Hook.f. <sup>Sp</sup>	Onagraceae
<i>Epilobium confertifolium</i> Hook.f. <sup>RR, Sp</sup>	Onagraceae
<i>Epilobium forbesii</i> Allan <sup>RR, Sp</sup>	Onagraceae
<i>Epilobium margaretiae</i> Brockie <sup>RR, Sp</sup>	Onagraceae

## APPENDIX 1 (continued)

<i>Epilobium petraeum</i> Heenan <sup>sp</sup>	Onagraceae
<i>Epilobium purpuratum</i> Hook.f. <sup>sp</sup>	Onagraceae
<i>Epilobium vernicosum</i> Cheeseman <sup>RR</sup>	Onagraceae
<i>Epilobium wilsonii</i> Petrie <sup>RR, sp</sup>	Onagraceae
<i>Euchiton paludosus</i> (Petrie) Holub <sup>DP, sp</sup>	Asteraceae
<i>Euchiton polylepis</i> (D.G.Drury) Breitw. et J.M.Ward <sup>DR, PD, sp</sup>	Asteraceae
<i>Euphrasia drucei</i> Ashwin <sup>OL, sp</sup>	Orobanchaceae
<i>Euphrasia integrifolia</i> Petrie <sup>sp</sup>	Orobanchaceae
<i>Euphrasia repens</i> Hook.f. <sup>DR, sp</sup>	Orobanchaceae
<i>Euphrasia wettsteiniana</i> Du Rietz <sup>sp</sup>	Orobanchaceae
<i>Ewartiothamnus sinclairii</i> (Hook.f.) Anderb. <sup>sp</sup>	Asteraceae
<i>Festuca actae</i> Connor <sup>OL</sup>	Poaceae
<i>Festuca coxii</i> (Petrie) Hack. <sup>IE, RR</sup>	Poaceae
<i>Festuca luciarum</i> Connor <sup>RR, sp</sup>	Poaceae
<i>Festuca matthewsii</i> subsp. <i>pisamontis</i> Connor <sup>RR</sup>	Poaceae
<i>Festuca ultramafica</i> Connor <sup>RR, sp</sup>	Poaceae
<sup>†</sup> <i>Fimbristylis velata</i> R.Br. <sup>EF, SO, sp</sup>	Cyperaceae
<i>Fuchsia procumbens</i> A.Cunn. <sup>sp</sup>	Onagraceae
<i>Geniostoma ligustrifolium</i> var. <i>crassum</i> Cheeseman <sup>OL</sup>	Loganiaceae
<i>Geniostoma ligustrifolium</i> var. <i>majus</i> Cheeseman <sup>IE, OL</sup>	Loganiaceae
<sup>†</sup> <i>Gentianella angustifolia</i> Glenny <sup>RR</sup>	Gentianaceae
<i>Gentianella antarctica</i> (Kirk) T.N.Ho et S.W.Liu <sup>IE, OL</sup>	Gentianaceae
<i>Gentianella antipoda</i> (Kirk) T.N.Ho et S.W.Liu <sup>IE, OL, sp</sup>	Gentianaceae
<i>Gentianella astonii</i> subsp. <i>arduana</i> Glenny et Molloy <sup>RR, sp</sup>	Gentianaceae
<sup>†</sup> <i>Gentianella astonii</i> (Petrie) T.N.Ho et S.W.Liu subsp. <i>astonii</i> <sup>RR</sup>	Gentianaceae
<i>Gentianella cerina</i> (Hook.f.) T.N.Ho et S.W.Liu <sup>IE, RR</sup>	Gentianaceae
<i>Gentianella chathamica</i> Cheeseman T.N.Ho et S.W.Liu subsp. <i>chathamica</i> <sup>IE, RR</sup>	Gentianaceae
<sup>†</sup> <i>Gentianella chathamica</i> subsp. <i>nemorosa</i> Glenny <sup>sp</sup>	Gentianaceae
<i>Gentianella concinna</i> (Hook.f.) T.N.Ho et S.W.Liu <sup>IE, OL</sup>	Gentianaceae
<sup>†</sup> <i>Gentianella decumbens</i> Glenny <sup>RR</sup>	Gentianaceae
<i>Gentianella filipes</i> (Cheeseman) T.N.Ho et S.W.Liu <sup>RR</sup>	Gentianaceae
<i>Gentianella gibbsii</i> (Petrie) T.N.Ho et S.W.Liu <sup>OL</sup>	Gentianaceae
<i>Gentianella lilliputiana</i> (C.J.Webb) Glenny <sup>sp</sup>	Gentianaceae
<i>Gentianella lineata</i> (Kirk) T.N.Ho et S.W.Liu <sup>sp</sup>	Gentianaceae
<i>Gentianella luteoalba</i> Glenny <sup>RR</sup>	Gentianaceae
<i>Gentianella magnifica</i> (Kirk) Glenny <sup>DR, RR</sup>	Gentianaceae
<i>Gentianella stellata</i> Glenny <sup>RR</sup>	Gentianaceae
<i>Geranium microphyllum</i> Hook.f. sens. str. <sup>RR</sup>	Geraniaceae
<i>Geranium traversii</i> Hook.f. <sup>IE, RR</sup>	Geraniaceae
<i>Geum albiflorum</i> Hook.f. <sup>IE, RR</sup>	Rosaceae
<i>Geum divergens</i> Cheeseman <sup>RR</sup>	Rosaceae
<i>Gingidia enysii</i> (Kirk) J.W.Dawson var. <i>enysii</i> <sup>RR</sup>	Apiaceae
<sup>†</sup> <i>Gingidia enysii</i> var. <i>peninsulare</i> J.W.Dawson <sup>OL</sup>	Apiaceae
<i>Gingidia flabellata</i> (Kirk) J.W.Dawson <sup>RR</sup>	Apiaceae
<i>Gingidia grisea</i> Heenan <sup>RR</sup>	Apiaceae
<i>Gingidia trifoliolata</i> (Hook.f.) J.W.Dawson <sup>RR, sp</sup>	Apiaceae
<i>Grammitis rawlingsii</i> Parris in Parris et Given <sup>sp</sup>	Grammitidaceae
<i>Grammitis rigida</i> Hombr. <sup>sp</sup>	Grammitidaceae
<i>Haastia pulvinaris</i> var. <i>minor</i> Laing <sup>RR, sp</sup>	Asteraceae
<i>Halocarpus kirkii</i> (Parl.) Quinn <sup>sp</sup>	Podocarpaceae
<i>Haloragis erecta</i> subsp. <i>cartilaginea</i> (Cheeseman) Orchard <sup>OL</sup>	Haloragaceae
<i>Hebe acutiflora</i> Cockayne <sup>PD, sp</sup>	Plantaginaceae
<i>Hebe amplexicaulis</i> (J.B.Armstr.) Cockayne et Allan f. <i>amplexicaulis</i> <sup>sp</sup>	Plantaginaceae
<i>Hebe amplexicaulis</i> f. <i>hirta</i> Garn.-Jones et Molloy <sup>RR</sup>	Plantaginaceae
<i>Hebe angustissima</i> (Cockayne) Bayly et Kellow <sup>sp</sup>	Plantaginaceae
<i>Hebe amulata</i> (Petrie) Cockayne et Allan <sup>st, RR, sp</sup>	Plantaginaceae
<i>Hebe benthamii</i> (Hook.f.) Cockayne et Allan <sup>RR, sp</sup>	Plantaginaceae
<i>Hebe biggarii</i> (Cockayne) Cockayne <sup>RR, sp</sup>	Plantaginaceae
<sup>†</sup> <i>Hebe bollonsii</i> (Cockayne) Cockayne et Allan <sup>RR</sup>	Plantaginaceae

<i>Hebe brevifolia</i> (Cheeseman) de Lange <sup>OL</sup>	Plantaginaceae
<i>Hebe calcicola</i> Bayly et Garn.-Jones <sup>RR</sup>	Plantaginaceae
<i>Hebe carnosula</i> (Hook.f.) Cockayne <sup>RR</sup>	Plantaginaceae
<i>Hebe chathamica</i> (Buchanan) Cockayne et Allan <sup>IE, RR</sup>	Plantaginaceae
<i>Hebe colensoi</i> (Hook.f.) Cockayne <sup>Sp</sup>	Plantaginaceae
<i>Hebe dieffenbachii</i> (Benth.) Cockayne et Allan <sup>IE, RR</sup>	Plantaginaceae
<i>Hebe dilatata</i> G.Simpson et J.S.Thomson <sup>Sp</sup>	Plantaginaceae
<i>Hebe evenosa</i> (Petrie) Cockayne et Allan <sup>RR</sup>	Plantaginaceae
<i>Hebe gibbsii</i> (Kirk) Cockayne et Allan <sup>DP, RR, Sp</sup>	Plantaginaceae
<i>Hebe insularis</i> (Cheeseman) Cockayne et Allan <sup>IE, RR</sup>	Plantaginaceae
<i>Hebe macrocalyx</i> (J.B.Armstr.) G.Simpson var. <i>macrocalyx</i> <sup>DP, Sp</sup>	Plantaginaceae
<i>Hebe obtusata</i> (Cheeseman) Cockayne et Allan <sup>RR, Sp</sup>	Plantaginaceae
<i>Hebe ochracea</i> Ashwin <sup>Sp</sup>	Plantaginaceae
<i>Hebe pareora</i> Garn.-Jones et Molloy <sup>RF, Sp</sup>	Plantaginaceae
<i>Hebe pauciflora</i> G.Simpson et J.S.Thomson <sup>Sp</sup>	Plantaginaceae
<i>Hebe pimeleoides</i> subsp. <i>faucicola</i> Kellow et Bayly <sup>RR, Sp</sup>	Plantaginaceae
<i>Hebe pubescens</i> subsp. <i>rehuarum</i> Bayly et de Lange <sup>IE, OL</sup>	Plantaginaceae
<i>Hebe pubescens</i> subsp. <i>sejuncta</i> Bayly et de Lange <sup>RR</sup>	Plantaginaceae
<i>Hebe ramosissima</i> G.Simpson et J.S.Thomson <sup>Sp</sup>	Plantaginaceae
<i>Hebe rigidula</i> (Cheeseman) Cockayne et Allan var. <i>rigidula</i> <sup>Sp</sup>	Plantaginaceae
<i>Hebe scopulorum</i> Bayley, de Lange et Garn.-Jones <sup>CD, PD, RR</sup>	Plantaginaceae
<i>Hebe stenophylla</i> var. <i>hesperia</i> Bayly et Garn.-Jones <sup>RR, Sp</sup>	Plantaginaceae
<i>Hebe stenophylla</i> var. <i>oliveri</i> Bayly et Garn.-Jones <sup>IE, OL, PD</sup>	Plantaginaceae
<i>Hebe strictissima</i> (Kirk) L.B.Moore <sup>OL</sup>	Plantaginaceae
<i>Hebe tairawhiti</i> B.D.Clarkson et Garn.-Jones <sup>Sp</sup>	Plantaginaceae
<i>Hebe townsonii</i> (Cheeseman) Cockayne et Allan <sup>RR, Sp</sup>	Plantaginaceae
<i>Hebe truncatula</i> (Colenso) L.B.Moore <sup>DP, RR, Sp</sup>	Plantaginaceae
<i>Hebe urvilleana</i> W.R.B.Oliv. <sup>RR</sup>	Plantaginaceae
<sup>†</sup> <i>Hebejeebie trifida</i> (W.R.B.Oliv.) Heads <sup>Sp</sup>	Plantaginaceae
<i>Helichrysum plumeum</i> Allan <sup>RR, Sp</sup>	Asteraceae
<i>Helichrysum selago</i> var. <i>tumidum</i> Cheeseman <sup>OL</sup>	Asteraceae
<sup>†</sup> <i>Heliohebe hulkeana</i> subsp. <i>evestita</i> Garn.-Jones <sup>RR</sup>	Plantaginaceae
<i>Hierochloa brunonis</i> Hook.f. <sup>RR, Sp</sup>	Poaceae
<i>Hoheria equitum</i> Heads <sup>RR</sup>	Malvaceae
<i>Homalanthus polyandrus</i> (Müll.Arg.) Cheeseman <sup>IE, RR</sup>	Euphorbiaceae
<i>Hymenochilus tristis</i> (Colenso) D.L.Jones, M.A.Clem. et Molloy <sup>DP, EF, Sp</sup>	Orchidaceae
<i>Hymenophyllum atrovirens</i> Colenso <sup>DP, RR, Sp</sup>	Hymenophyllaceae
<sup>†</sup> <i>Hymenophyllum australe</i> Willd. <sup>SO, Sp</sup>	Hymenophyllaceae
<i>Hypericum rubicundulum</i> Heenan <sup>DP</sup>	Hypericaceae
<sup>†</sup> <i>Hypolepis amaurorachis</i> (Kunze) Hook. <sup>EF, SO, Sp</sup>	Dennstaedtiaceae
<sup>†</sup> <i>Hypolepis dicksonioides</i> (Endl.) Hook. <sup>EF, SO, Sp</sup>	Dennstaedtiaceae
<i>Imperata cheesemanii</i> Hack. <sup>IE, RR</sup>	Poaceae
<sup>†</sup> <i>Ipomoea pes-caprae</i> subsp. <i>brasiliensis</i> (L.) Ooststr. <sup>RR, SO</sup>	Convolvulaceae
<sup>††</sup> <i>Juncus pusillus</i> Buchenau <sup>SO, Sp</sup>	Juncaceae
<sup>†</sup> <i>Juncus scheuchzerioides</i> Gaudich. <sup>RR, SO</sup>	Juncaceae
<i>Korthalsella salicornioides</i> (A.Cunn.) Tiegh. <sup>Sp</sup>	Loranthaceae
<i>Kunzea ericoides</i> var. <i>microflora</i> (G.Simpson) W.Harris <sup>RR</sup>	Myrtaceae
<i>Kunzea sinclairii</i> (Kirk) W.Harris <sup>IE, RR</sup>	Myrtaceae
<i>Lachnagrostis ammobia</i> Edgar <sup>Sp</sup>	Poaceae
<i>Lachnagrostis leptostachys</i> (Hook.f.) Zotov <sup>RR, Sp</sup>	Poaceae
<i>Lachnagrostis pilosa</i> subsp. <i>nubifera</i> Edgar <sup>IE, RR</sup>	Poaceae
<i>Lachnagrostis uda</i> Edgar <sup>Sp</sup>	Poaceae
<sup>††</sup> <i>Lagenifera barkeri</i> Kirk <sup>SO, Sp</sup>	Asteraceae
<sup>†</sup> <i>Leonohebe tetrasticha</i> (Hook.f.) Heads <sup>Sp</sup>	Plantaginaceae
<i>Leonohebe tumida</i> (Kirk) Heads <sup>Sp</sup>	Plantaginaceae
<sup>†</sup> <i>Lepilaena bilocularis</i> Kirk <sup>SO, Sp</sup>	Potamogetonaceae
<i>Leptecophylla robusta</i> (Hook.f.) C.M.Weiller <sup>IE, RR</sup>	Ericaceae
<i>Leptinella albida</i> (D.G.Lloyd) D.G.Lloyd et C.J.Webb <sup>RR</sup>	Asteraceae
<i>Leptinella atrata</i> subsp. <i>luteola</i> (D.G.Lloyd) D.G.Lloyd et C.J.Webb <sup>RR, Sp</sup>	Asteraceae
<i>Leptinella calcarea</i> (D.G.Lloyd) D.G.Lloyd et C.J.Webb <sup>RR</sup>	Asteraceae
<i>Leptinella dispersa</i> (D.G.Lloyd) D.G.Lloyd et C.J.Webb subsp. <i>dispersa</i> <sup>DP, Sp</sup>	Asteraceae



## APPENDIX 1 (continued)

<i>Leptinella dispersa</i> subsp. <i>rupestris</i> (D.G.Lloyd) D.G.Lloyd et C.J.Webb	RF, Sp	Asteraceae
<sup>1</sup> <i>Leptinella lanata</i> Hook.f.	RR, SO	Asteraceae
<i>Leptinella minor</i> Hook.f.	OL	Asteraceae
<sup>1</sup> <i>Leptinella plumosa</i> Hook.f.	RR, SO	Asteraceae
<i>Leptinella potentillina</i> F.Muell.	RR	Asteraceae
<i>Leptinella pyrethrifolia</i> var. <i>linearifolia</i> (Cheeseman) D.G.Lloyd et C.J.Webb	OL	Asteraceae
<i>Leptinella serrulata</i> (D.G.Lloyd) D.G.Lloyd et C.J.Webb	Sp	Asteraceae
<i>Leptinella traillii</i> subsp. <i>pulchella</i> (Kirk) D.G.Lloyd et C.J.Webb	Sp	Asteraceae
<i>Leptinella traillii</i> (Kirk) D.G.Lloyd et C.J.Webb subsp. <i>traillii</i>	Sp	Asteraceae
<i>Leucogenes neglecta</i> Molloy	RR, Sp	Asteraceae
<sup>1</sup> <i>Leucopogon parviflorus</i> (Andrews) Lindl.	RR, SO	Ericaceae
<i>Leucopogon xerampelinus</i> de Lange, Heenan et M.I.Dawson	OL	Ericaceae
<i>Libertia edgariae</i> Blanchon, Murray et Braggins	Sp	Iridaceae
<i>Libocedrus plumosa</i> (D.Don) Sarg.	Sp	Cupressaceae
<i>Lignocarpa diversifolia</i> (Cheeseman) J.W.Dawson	DP, Sp	Apiaceae
<i>Lindsaea viridis</i> Colenso	Sp	Dennstaedtiaceae
<sup>1</sup> <i>Lobelia arenaria</i> (Hook.f.) Heenan et de Lange	Sp	Lobeliaceae
<sup>1</sup> <i>Lobelia perpusilla</i> Hook.f.	Sp	Lobeliaceae
<i>Luzula crenulata</i> Buchenau	RR	Juncaceae
<i>Luzula traversii</i> var. <i>tenuis</i> Edgar	RR	Juncaceae
<i>Macropiper excelsum</i> subsp. <i>peltatum</i> f. <i>delangei</i> R.O.Gardner	IE, OL	Piperaceae
<i>Macropiper excelsum</i> subsp. <i>peltatum</i> R.O.Gardner f. <i>peltatum</i>	Sp	Piperaceae
<sup>1</sup> <i>Macropiper excelsum</i> subsp. <i>psittacorum</i> (Endl.) Sykes	OL, SO	Piperaceae
<i>Macropiper melchior</i> Sykes	IE, OL	Piperaceae
<sup>1</sup> <i>Macrothelypteris torresiana</i> (Gaudich.) Ching	DP, EF, SO, Sp	Thelypteridaceae
<i>Mazus arenarius</i> Heenan, P.N.Johnson et C.J.Webb	DP, RR	Phrymaceae
<i>Meliccytus chathamicus</i> (F.Muell.) Garn.-Jones	RR	Violaceae
<i>Meliccytus drucei</i> Molloy et B.D.Clarkson	CD, OL	Violaceae
<i>Meliccytus obovatus</i> (Kirk) Garn.-Jones	RR, Sp	Violaceae
<i>Meryta sinclairii</i> (Hook.f.) Seem.	IE, OL	Araliaceae
<i>Metrosideros kermadecensis</i> W.R.B.Oliv.	IE, OL	Myrtaceae
<i>Microlaena carsei</i> Cheeseman	Sp	Poaceae
<sup>1</sup> <i>Mimulus repens</i> R.Br.	SO, Sp	Phrymaceae
<i>Mitrasacme montana</i> var. <i>helmsii</i> Kirk	RR, Sp	Loganiaceae
<sup>1</sup> <i>Molloybas cryptanthus</i> (Hatch) Molloy, D.L.Jones et M.A.Clem.	Sp	Orchidaceae
<i>Montia angustifolia</i> Heenan	DP, RR, Sp	Portulacaceae
<i>Montia erythrophylla</i> Heenan	RR, Sp	Portulacaceae
<i>Montia racemosa</i> (Buchanan) Heenan	RR, Sp	Portulacaceae
<i>Myoporum kermadecense</i> Sykes	IE, RR	Scrophulariaceae
<i>Myosotis antarctica</i> Hook.f.	IE, OL	Boraginaceae
<i>Myosotis arnoldii</i> L.B.Moore	RR	Boraginaceae
<i>Myosotis brockiei</i> L.B.Moore et M.J.A.Simpson	RR	Boraginaceae
<i>Myosotis capitata</i> Hook.f.	RR	Boraginaceae
<i>Myosotis concinna</i> Cheeseman	RR	Boraginaceae
<i>Myosotis eximia</i> Petrie	RR	Boraginaceae
<i>Myosotis explanata</i> Cheeseman	EF, RR	Boraginaceae
<sup>1</sup> <i>Myosotis goyenii</i> Petrie	Sp	Boraginaceae
<i>Myosotis monroi</i> Cheeseman	RR	Boraginaceae
<i>Myosotis oreophila</i> Petrie	EF, RR, Sp	Boraginaceae
<i>Myosotis rakiura</i> L.B.Moore	RR, Sp	Boraginaceae
<i>Myosotis spathulata</i> G.Forst.	DP, EF, Sp	Boraginaceae
<i>Myosotis tenericaulis</i> Petrie	DP, Sp	Boraginaceae
<i>Myosotis uniflora</i> Hook.f.	DP, Sp	Boraginaceae
<sup>1</sup> <i>Myosotis venosa</i> Colenso	Sp	Boraginaceae
<sup>1</sup> <i>Myriophyllum votschii</i> Schindl.	Sp	Haloragaceae
<i>Myrsine argentea</i> Heenan et de Lange	CD, OL	Myrsinaceae
<i>Myrsine kermadecensis</i> Cheeseman	IE, OL	Myrsinaceae
<i>Myrsine oliveri</i> Allan	IE, Inc, OL	Myrsinaceae
<sup>1</sup> <i>Nephrolepis hirsutula</i> (G.Forst.) C.Presl	RR, SO	Nephrolepidaceae

<i>Olearia allomii</i> Kirk <sup>IE, RR</sup>	Asteraceae
<i>Olearia angulata</i> Kirk <sup>Sp</sup>	Asteraceae
<i>Olearia cheesemanii</i> Cockayne et Allan <sup>Sp</sup>	Asteraceae
<sup>†</sup> <i>Olearia colensoi</i> var. <i>argentea</i> Allan <sup>DP, RR</sup>	Asteraceae
<sup>†</sup> <i>Olearia coriacea</i> Kirk <sup>Sp</sup>	Asteraceae
<i>Olearia crosby-smithiana</i> Petrie <sup>RR</sup>	Asteraceae
<i>Olearia quinquevulnera</i> Heenan <sup>DP, PD, Sp</sup>	Asteraceae
<i>Olearia semidentata</i> Decne. ex Hook.f. <sup>IE, RR</sup>	Asteraceae
<i>Oreopanthera alpina</i> (Hook.f.) Hutch. <sup>RR</sup>	Euphorbiaceae
<i>Ourisia confertifolia</i> Arroyo <sup>RR, Sp</sup>	Plantaginaceae
<i>Ourisia remotifolia</i> Arroyo <sup>RR, Sp</sup>	Plantaginaceae
<i>Ourisia spathulata</i> Arroyo <sup>RR, Sp</sup>	Plantaginaceae
<i>Pachycladon crenatus</i> Philipson <sup>RR</sup>	Brassicaceae
<i>Pachycladon wallii</i> (Carse) Heenan et A.D.Mitch. <sup>RR</sup>	Brassicaceae
<i>Pachystegia minor</i> (Cheeseman) Molloy <sup>DP, RR</sup>	Asteraceae
<i>Pachystegia rufa</i> Molloy <sup>RR</sup>	Asteraceae
<sup>†</sup> <i>Parahebe cheesemanii</i> subsp. <i>flabellata</i> Garn.-Jones <sup>DP, RR</sup>	Plantaginaceae
<i>Parahebe martinii</i> (Garn.-Jones) Garn.-Jones <sup>RR, Sp</sup>	Plantaginaceae
<i>Parahebe senex</i> Garn.-Jones <sup>RR, Sp</sup>	Plantaginaceae
<sup>†</sup> <i>Parahebe spectabilis</i> Garn.-Jones <sup>DP, RR</sup>	Plantaginaceae
<sup>†</sup> <i>Parsonia capsularis</i> var. <i>grandiflora</i> Carse <sup>Sp</sup>	Apocynaceae
<i>Parsonia praeruptis</i> Heads et de Lange <sup>OL</sup>	Apocynaceae
<sup>†</sup> <i>Peperomia tetraphylla</i> (G.Forst.) Hook. et Am. <sup>SO, Sp</sup>	Piperaceae
<sup>†</sup> <i>Petalochilus alatus</i> (R.Br.) D.L.Jones et M.A.Clem. <sup>SO, Sp</sup>	Orchidaceae
<sup>†</sup> <i>Petalochilus bartlettii</i> (Hatch) D.L.Jones et M.A.Clem. <sup>Sp</sup>	Orchidaceae
<sup>†</sup> <i>Petalochilus variegatus</i> (Colenso) D.L.Jones et M.A.Clements <sup>Sp</sup>	Orchidaceae
<sup>†</sup> <i>Picris angustifolia</i> DC. subsp. <i>angustifolia</i> <sup>DP, EF, SO, Sp</sup>	Asteraceae
<sup>†</sup> <i>Picris angustifolia</i> subsp. <i>merxmulleri</i> Lack et S.Holzappel <sup>DP, SO</sup>	Asteraceae
<sup>†</sup> <i>Pilularia novae-hollandiae</i> A.Braun <sup>Sp</sup>	Marsileaceae
<i>Pimelea lyallii</i> Hook.f. <sup>Sp</sup>	Thymelaeaceae
<i>Pimelea poppelwellii</i> Petrie <sup>RR</sup>	Thymelaeaceae
<i>Pimelea pseudolyallii</i> Allan <sup>Sp</sup>	Thymelaeaceae
<i>Pimelea suteri</i> Kirk <sup>RR</sup>	Thymelaeaceae
<i>Pimelea telura</i> C.J.Burrows <sup>IE, OL</sup>	Thymelaeaceae
<i>Pittosporum ellipticum</i> Kirk <sup>Sp</sup>	Pittosporaceae
<i>Pittosporum fairchildii</i> Cheeseman <sup>IE, OL</sup>	Pittosporaceae
<i>Pittosporum pimeleoides</i> subsp. <i>majus</i> (Cheeseman) R.C.Cooper <sup>OL</sup>	Pittosporaceae
<i>Pittosporum pimeleoides</i> R.Cunn. subsp. <i>pimeleoides</i> <sup>Sp</sup>	Pittosporaceae
<i>Pittosporum virgatum</i> Kirk <sup>Sp</sup>	Pittosporaceae
<i>Plantago aucklandica</i> Hook.f. <sup>IE, RR</sup>	Plantaginaceae
<i>Plantago obconica</i> Sykes <sup>Sp</sup>	Plantaginaceae
<i>Plantago spathulata</i> subsp. <i>picta</i> (Colenso) Sykes <sup>RR, Sp</sup>	Plantaginaceae
<i>Plantago triantha</i> Spreng <sup>IE, OL</sup>	Plantaginaceae
<i>Pleurophyllum criniferum</i> Hook.f. <sup>RR</sup>	Asteraceae
<sup>†</sup> <i>Pleurophyllum hookeri</i> Buchanan <sup>RR, SO</sup>	Asteraceae
<i>Pleurophyllum speciosum</i> Hook.f. <sup>RR</sup>	Asteraceae
<sup>†</sup> <i>Pleurosorus rutifolius</i> (R.Br.) Fée <sup>SO, Sp</sup>	Aspleniaceae
<i>Poa acicularifolia</i> Buchanan subsp. <i>acicularifolia</i> <sup>RR</sup>	Poaceae
<i>Poa acicularifolia</i> subsp. <i>ophitalis</i> Edgar <sup>RR, Sp</sup>	Poaceae
<i>Poa antipoda</i> Petrie <sup>RR, Sp</sup>	Poaceae
<i>Poa aucklandica</i> Petrie subsp. <i>aucklandica</i> <sup>IE, OL</sup>	Poaceae
<i>Poa aucklandica</i> subsp. <i>campbellensis</i> (Petrie) Edgar <sup>IE, OL</sup>	Poaceae
<i>Poa chathamica</i> Petrie <sup>IE, RR</sup>	Poaceae
<sup>†</sup> <i>Poa foliosa</i> (Hook.f.) Hook.f. <sup>RR, SO</sup>	Poaceae
<i>Poa incrassata</i> Petrie <sup>Sp</sup>	Poaceae
<i>Poa polyphylla</i> Hack. <sup>IE, RR</sup>	Poaceae
<i>Poa pygmaea</i> Buchanan <sup>RR, Sp</sup>	Poaceae
<i>Poa ramosissima</i> Hook.f. <sup>RR</sup>	Poaceae
<i>Poa senex</i> Edgar <sup>DP, RR</sup>	Poaceae
<i>Poa sudicola</i> Edgar <sup>RR</sup>	Poaceae

## APPENDIX 1 (continued)

<i>Poa tennantiana</i> Petrie <sub>RR</sub>	Poaceae
<i>Poa xenica</i> Edgar et Connor <sub>DF,RR</sub>	Poaceae
<i>Pomaderris hamiltonii</i> L.B.Moore <sub>RR,Sp</sub>	Rhamnaceae
<i>Pomaderris paniculosa</i> subsp. <i>novaezealandiae</i> (L.B.Moore) N.G.Walsh <sub>RR,Sp</sub>	Rhamnaceae
<i>Pomaderris rugosa</i> Cheeseman <sub>RR,Sp</sub>	Rhamnaceae
† <i>Poranthera microphylla</i> Brongn. <sub>RR,SO,Sp</sub>	Euphorbiaceae
<i>Pseudopanax chathamicus</i> Kirk <sub>IE,RR</sub>	Araliaceae
<i>Pseudopanax ferox</i> Kirk <sub>PD,Sp</sub>	Araliaceae
<i>Pseudopanax gilliesii</i> Kirk <sub>RR,Sp</sub>	Araliaceae
<i>Pseudopanax kermadecensis</i> (W.R.B.Oliv.) Philipson <sub>IE,OL</sub>	Araliaceae
<i>Pseudopanax macintyreii</i> (Cheeseman) Wardle <sub>Sp</sub>	Araliaceae
<i>Pterostylis auriculata</i> Colenso <sub>Sp</sub>	Orchidaceae
<i>Pterostylis cernua</i> D.L.Jones, Molloy et M.A.Clem. <sub>Sp</sub>	Orchidaceae
† <i>Pterostylis foliata</i> Hook.f. <sub>Sp</sub>	Orchidaceae
† <i>Pterostylis humilis</i> R.S.Rogers <sub>Sp</sub>	Orchidaceae
<i>Pterostylis porrecta</i> D.L.Jones, Molloy et M.A.Clem. <sub>Sp</sub>	Orchidaceae
<i>Pterostylis silvicultrix</i> (F.Muell.) Molloy, D.L.Jones et M.A.Clem. <sub>IE</sub>	Orchidaceae
<i>Puccinellia antipoda</i> Petrie <sub>IE,OL</sub>	Poaceae
<i>Puccinellia chathamica</i> Cheeseman <sub>EF,RR</sub>	Poaceae
<i>Puccinellia walkeri</i> Kirk <sub>DF,Sp</sub>	Poaceae
† <i>Ranunculus crithmifolius</i> Hook.f. <sub>Sp</sub>	Ranunculaceae
<i>Ranunculus grahamii</i> Petrie <sub>CD,RR</sub>	Ranunculaceae
<i>Ranunculus kirkii</i> Petrie <sub>RR</sub>	Ranunculaceae
<i>Ranunculus maculatus</i> Cockayne et Allan <sub>RR</sub>	Ranunculaceae
<i>Ranunculus pinguis</i> Hook.f. <sub>RR</sub>	Ranunculaceae
<i>Ranunculus ranceorum</i> de Lange <sub>EF,RR,Sp</sub>	Ranunculaceae
<i>Ranunculus scrithalis</i> Garn.-Jones <sub>OL,Sp</sub>	Ranunculaceae
<i>Ranunculus simulans</i> Garn.-Jones <sub>DF,Sp</sub>	Ranunculaceae
<i>Ranunculus stylosus</i> H.D.Wilson et Garn.-Jones <sub>OL</sub>	Ranunculaceae
<i>Ranunculus subscaposus</i> Hook.f. <sub>RR</sub>	Ranunculaceae
<i>Ranunculus ternatifolius</i> Kirk <sub>DF,EF,Sp</sub>	Ranunculaceae
<i>Raoulia beauverdii</i> Cockayne <sub>Sp</sub>	Asteraceae
<i>Raoulia cinerea</i> Petrie <sub>RR</sub>	Asteraceae
<i>Raoulia goyenii</i> Kirk <sub>RR</sub>	Asteraceae
<i>Raoulia hectorii</i> var. <i>mollis</i> Buchanan <sub>RR</sub>	Asteraceae
<i>Raoulia petriensis</i> Kirk <sub>RR,Sp</sub>	Asteraceae
<i>Raoulia rubra</i> Buchanan <sub>RR</sub>	Asteraceae
† <i>Rhopalostylis baueri</i> (Seem.) H. Wendl. et Drude <sub>RR,SO</sub>	Arecaceae
<i>Rytidosperma petrosum</i> Connor et Edgar <sub>RR,Sp</sub>	Poaceae
† <i>Scaevola gracilis</i> Hook.f. <sub>RR,SO</sub>	Goodeniaceae
† <i>Schizaea dichotoma</i> (L.) Sm. <sub>SO,Sp</sub>	Schizaeaceae
<i>Schizeilema allanii</i> Cheeseman <sub>RR</sub>	Araliaceae
<i>Schizeilema pallidum</i> (Kirk) Domin <sub>DF,Sp</sub>	Araliaceae
<i>Schizeilema reniforme</i> (Hook.f.) Domin <sub>RR</sub>	Araliaceae
† <i>Schoenus caespitans</i> Petrie <sub>DF,Sp</sub>	Cyperaceae
<i>Senecio carnosulus</i> (Kirk) C.J.Webb <sub>Sp</sub>	Asteraceae
<i>Senecio dunedinensis</i> Belcher <sub>Sp</sub>	Asteraceae
<i>Senecio glaucophyllus</i> subsp. <i>basimudus</i> Ornduff <sub>DF,RR</sub>	Asteraceae
<i>Senecio glaucophyllus</i> Cheeseman subsp. <i>glaucophyllus</i> <sub>RR</sub>	Asteraceae
<i>Senecio hauwai</i> Sykes <sub>RR,Sp</sub>	Asteraceae
<i>Senecio marotiri</i> C.J.Webb <sub>Sp</sub>	Asteraceae
<i>Senecio radiolatus</i> subsp. <i>antipodus</i> (Kirk) C.J.Webb <sub>IE,OL,Sp</sub>	Asteraceae
<i>Senecio repangae</i> subsp. <i>pokohimuensis</i> de Lange et B.G.Murray <sub>IE,OL,Sp</sub>	Asteraceae
<i>Senecio repangae</i> de Lange et B.G.Murray subsp. <i>repangae</i> <sub>Sp</sub>	Asteraceae
†† <i>Sicyos australis</i> sens. str. <sub>CD,RR,TO</sub>	Cucurbitaceae
<i>Solanum aviculare</i> var. <i>latifolium</i> G.T.S.Baylis <sub>Sp</sub>	Solanaceae
<i>Sophora fulvida</i> (Allan) Heenan et de Lange <sub>RR</sub>	Fabaceae

<i>Sophora longicarinata</i> G.Simpson et J.S.Thomson <sub>RR</sub>	Fabaceae
<i>Sophora molloyi</i> Heenan et de Lange <sub>RR, Sp</sub>	Fabaceae
<i>Sporadanthus traversii</i> (F.Muell.) F.Muell. ex Kirk <sub>IE, OL</sub>	Restionaceae
† <i>Sprengelia incarnata</i> Sm. <sub>DP, SO</sub>	Ericaceae
<i>Stegostyla atradenia</i> (D.L.Jones, Molloy et M.A.Clem.) D.L.Jones et M.A.Clem. <sub>EF, Sp</sub>	Orchidaceae
<i>Stellaria decipiens</i> Hook.f. var. <i>decipiens</i> <sub>RR, Sp</sub>	Caryophyllaceae
<i>Stellaria decipiens</i> var. <i>angustata</i> Kirk <sub>IE, OL</sub>	Caryophyllaceae
<i>Stenostachys deceptorix</i> Connor <sub>RR, Sp</sub>	Poaceae
<i>Stenostachys laevis</i> (Petrie) Connor <sub>DP, Sp</sub>	Poaceae
† <i>Stilbocarpa polaris</i> (Hombr. et Jacquinot) A.Gray <sub>RR, SO</sub>	Araliaceae
<i>Stilbocarpa robusta</i> Kirk <sub>IE, OL</sub>	Araliaceae
<i>Streblus smithii</i> (Cheeseman) Corner <sub>IE, OL</sub>	Moraceae
† <i>Stuckenia pectinata</i> (L.) Börner <sub>PD, SO, Sp</sub>	Potamogetonaceae
† <i>Tetragonia tetragonioides</i> (Pall.) Kuntze <sub>EF, SO, Sp</sub>	Aizoaceae
<i>Thelymitra formosa</i> Colenso <sub>EF, Sp</sub>	Orchidaceae
† <i>Thismia rodwayi</i> F.Muell. <sub>DP, Sp, TO</sub>	Burmanniaceae
<i>Townsonia deflexa</i> Cheeseman Sp	Orchidaceae
<i>Trichomanes colensoi</i> Hook.f. <sub>Sp</sub>	Hymenophyllaceae
<i>Trisetum drucei</i> Edgar <sub>RR, Sp</sub>	Poaceae
<i>Tristeum serpentinum</i> Edgar et A.P.Druce <sub>RR, Sp</sub>	Poaceae
† <i>Uncinia aucklandica</i> Hamlin <sub>DP, RR</sub>	Cyperaceae
†† <i>Uncinia hookeri</i> Boott <sub>RR, SO</sub>	Cyperaceae
<i>Uncinia longifructus</i> (Kük.) Petrie <sub>DP, Sp</sub>	Cyperaceae
† <i>Uncinia obtusifolia</i> Heenan <sub>DP, Sp</sub>	Cyperaceae
<i>Uncinia purpurata</i> Petrie <sub>Sp</sub>	Cyperaceae
<i>Uncinia viridis</i> (C.B.Clarke) Edgar <sub>DP, Sp</sub>	Cyperaceae
<i>Urtica aspera</i> Petrie <sub>Sp</sub>	Urticaceae
<i>Wahlenbergia akaroa</i> J.A.Petterson <sub>DP, OL</sub>	Campanulaceae
<i>Wahlenbergia albomarginata</i> subsp. <i>flexilis</i> (Petrie) J.A.Petterson <sub>RR, Sp</sub>	Campanulaceae
<i>Wahlenbergia albomarginata</i> subsp. <i>olivina</i> J.A.Petterson <sub>RR, Sp</sub>	Campanulaceae
<i>Wahlenbergia cartilaginea</i> Hook.f. <sub>Sp</sub>	Campanulaceae
<i>Wahlenbergia congesta</i> (Cheeseman) N.E.Br. <sub>Sp</sub>	Campanulaceae
<i>Wahlenbergia matthewsii</i> Cockayne <sub>RR</sub>	Campanulaceae
<i>Wahlenbergia pygmaea</i> subsp. <i>drucei</i> J.A.Petterson <sub>OL</sub>	Campanulaceae
<i>Xeronema callistemon</i> f. <i>bracteosa</i> (L.B.Moore) de Lange et E.K.Cameron <sub>IE, OL, SP</sub>	Xeronemataceae
<i>Xeronema callistemon</i> W.R.B.Oliv. f. <i>callistemon</i> <sub>RR</sub>	Xeronemataceae
<i>Zotovia acicularis</i> Edgar et Connor <sub>RR, Sp</sub>	Poaceae

### Non-Resident Native (25)

Taxa whose natural presence in New Zealand is either sporadic or temporary (1. Vagrant) or they have succeeded in recently ( $\leq 50$  years) establishing themselves beyond their point of introduction (2. Coloniser).

#### 1. Vagrant (12)

Taxa whose occurrences, though natural, are sporadic and typically transitory. Most (if not all) fail to establish themselves beyond their point of arrival because of reproductive failure or for specific ecological reasons. Listed here also are those vagrants which are currently known in the New Zealand Botanical Region only from historic herbarium specimens but which remain extant in their country of origin, and so retain the potential to re-establish themselves.

† <i>Doodia aspera</i> R.Br. <sub>EW, SO</sub>	Blechnaceae
† <i>Epilobium gunniamum</i> Hausskn. <sub>SO</sub>	Onagraceae
† <i>Gratiola pubescens</i> Benth. <sub>SO</sub>	Plantaginaceae
† <i>Lepturus repens</i> var. <i>cinereus</i> (Burcham) Fosberg <sub>OL, SO</sub>	Poaceae
† <i>Mazus pumilio</i> R.Br. <sub>SO</sub>	Phrymaceae
† <i>Muellerina celastroides</i> (Schult.f. et J.H.Schult.bis) Tiegh. <sub>SO</sub>	Loranthaceae
†† <i>Myrmechila formicifera</i> (Fitzg.) D.L.Jones et M.A.Clem. <sub>EW, SO</sub>	Orchidaceae
† <i>Myrmechila trapeziformis</i> (Fitzg.) D.L.Jones et M.A.Clem. <sub>EW, SO</sub>	Orchidaceae
† <i>Pterostylis nutans</i> R.Br. <sub>SO</sub>	Orchidaceae
† <i>Senecio australis</i> (Forst.f.) Willd. <sub>SO</sub>	Asteraceae
† <i>Simpliglottis valida</i> (D.L.Jones) Szlach. <sub>SO</sub>	Orchidaceae
† <i>Sticherus tener</i> (R.Br.) Ching <sub>DP, SO</sub>	Gleicheniaceae

## APPENDIX 1 (continued)

## 2. Coloniser (13)

Taxa that otherwise trigger Threatened categories because of small population size, but have arrived in New Zealand without direct or indirect help from humans and have been successfully reproducing in the wild since 1950.

† <i>Achyranthes velutina</i> Moq. <sub>SO</sub>	Amaranthaceae
† <i>Cryptostylis subulata</i> (Labill.) Rehb.f. <sub>SO</sub>	Orchidaceae
†† <i>Carpobrotus glaucescens</i> (Haw.) Schwantes <sub>SO</sub>	Aizoaceae
†† <i>Disphyma clavellatum</i> (Haw.) Chinnock <sub>SO</sub>	Aizoaceae
† <i>Diplodium alveatum</i> (Garnet) D.L.Jones, et M.A.Clem. <sub>SO</sub>	Orchidaceae
†† <i>Drosera peltata</i> Thunb. <sub>DR, EF, SO</sub>	Droseraceae
† <i>Gratiola pedunculata</i> R.Br. <sub>SO</sub>	Plantaginaceae
† <i>Peperomia blanda</i> (Jacq.) Humb., Bonpl. et Kunth. <sub>OL, SO</sub>	Piperaceae
† <i>Plectranthus parviflorus</i> Willd. <sub>SO</sub>	Lamiaceae
†† <i>Pteris vittata</i> L. <sub>SO</sub>	Pteridaceae
† <i>Scirpus polystachyus</i> F.Muell. <sub>SO</sub>	Cyperaceae
† <i>Thelymitra malvina</i> M.A.Clem. <sub>EF, SO</sub>	Orchidaceae
† <i>Wilsonia backhousei</i> Hook.f. <sub>SO</sub>	Convolvulaceae

## Data Deficient (35)

Taxa that are suspected but not definitely known to belong to any of the above categories due to a lack of current information about their present-day distribution and abundance. It is hoped that listing such taxa will stimulate research to find out the true category or threat (for a fuller definition see Townsend et al. 2008).

† <i>Alseuosmia banksii</i> var. <i>linarifolia</i> (A. Cunn.) R.O.Gardner	Alseuosmiaceae
†† <i>Asplenium trichomanes</i> subsp. <i>quadrialeans</i> D.E.Mey. emend. Lovis <sub>SO</sub>	Aspleniaceae
<i>Brachyscome humilis</i> G. Simpson et J.S.Thomson	Asteraceae
<i>Carex albula</i> Allan	Cyperaceae
† <i>Carmichaelia uniflora</i> Kirk	Fabaceae
<i>Celmisia cordatifolia</i> var. <i>brockettii</i> W.Martin	Asteraceae
<i>Celmisia cordatifolia</i> var. <i>similis</i> W.Martin	Asteraceae
<i>Chionohebe myosotoides</i> (Ashwin) B.G.Briggs et Ehrend.	Plantaginaceae
† <i>Coprosma rubra</i> Petrie	Rubiaceae
<i>Dracophyllum longifolium</i> var. <i>septentrionale</i> W.R.B.Oliv.	Ericaceae
†† <i>Eleocharis pusilla</i> R.Br. <sub>SO</sub>	Cyperaceae
† <i>Epilobium matthewsii</i> Petrie	Onagraceae
<i>Euchiton ensifer</i> (D.G.Drury) Holub	Asteraceae
† <i>Gingidia baxterae</i> (J.W.Dawson) C.J.Webb	Apiaceae
† <i>Grammitis gunnii</i> Parris <sub>SO</sub>	Grammitidaceae
<i>Haastia recurva</i> var. <i>wallii</i> Cockayne	Asteraceae
† <i>Isolepis fuitans</i> var. <i>lenticularis</i> (R.Br.) Muasya <sub>SO</sub>	Cyperaceae
<i>Koeleria riguorum</i> Edgar et Gibb	Poaceae
<i>Lachnagrostis tenuis</i> (Cheeseman) Edgar	Poaceae
† <i>Leptinella maniototo</i> (Petrie) D.G.Lloyd et C.J.Webb	Asteraceae
<i>Myosotis glabrescens</i> L.B.Moore	Boraginaceae
<i>Myosotis suavis</i> Petrie	Boraginaceae
† <i>Nematoceras papillosum</i> (Colenso) D.L.Jones et M.A.Clem.	Orchidaceae
<i>Nematoceras rivulare</i> (A.Cunn.) Hook.f.	Orchidaceae
† <i>Pimelea longifolia</i> Sol. ex Wickstr.	Thymelaeaceae
† <i>Pimelea traversii</i> subsp. <i>boreus</i> C.J.Burrows <sub>RR, Sp</sub>	Thymelaeaceae
† <i>Pimelea traversii</i> subsp. <i>exedra</i> C.J.Burrows	Thymelaeaceae
† <i>Polygonum plebeium</i> R.Br. <sub>SO</sub>	Polygonaceae
<i>Ranunculus macropus</i> Hook.f.	Ranunculaceae
† <i>Rytidosperma horrens</i> Connor et Molloy	Poaceae
<i>Rytidosperma merum</i> Connor et Edgar	Poaceae
† <i>Rytidosperma thomsonii</i> (Buchanan) Connor et Edgar	Poaceae
† <i>Stenostachys gracilis</i> (Hook.f.) Connor	Poaceae
† <i>Uncinia elegans</i> (Kük.) Hamlin <sub>SO</sub>	Cyperaceae
<i>Uncinia sinclairii</i> Boott <sub>Sp</sub>	Cyperaceae

**APPENDIX 2** Taxonomically indeterminate listings.

This appendix includes described taxa whose taxonomic status is uncertain and requires further investigation, and also potentially distinct plants whose taxonomic status has yet to be determined. In both instances, available information suggests that those plants listed could be under some level of threat. Definitions of categories follow those given in Appendix 1. †Denotes indigenous taxa found naturally outside New Zealand. ‡Denotes an addition to this list (cf. de Lange et al. 2004).

**Qualifiers**

Full definitions are provided for the qualifiers used in this list by Townsend et al. (2008).

CD Conservation Dependent

DP Data Poor

EF Extreme Fluctuations

IE Island Endemic

OL One Location in New Zealand

PD Partial Decline

RR Range Restricted

RF Recruitment Failure

SO Secure Overseas

Sp Sparse

St Stable

TO Threatened Overseas

**Extinct (1)**

*Chenopodium pusillum* Hook.f. (AK 3956)

Chenopodiaceae

**Threatened (63)****1. Nationally Critical (51)**

‡*Acaena* aff. *rorida* (OTA 59561; Pool Burn) <sup>DP, OL</sup>

*Botrychium* aff. *lunaria* (CHR 289336; NW Nelson) <sup>RR</sup>

*Brachyglottis cockaynei* (G.Simpson et J.S.Thomson) B.Nord. (AK 253995) <sup>RR</sup>

*Brachyscome* (a) (WELT 10278; Ward) <sup>DP, OL</sup>

*Calochilus* aff. *herbaceus* (CHR 65825; Kaimaumu) <sup>EF, SO, Sp</sup>

*Cardamine* (a) (CHR 500569; Awahokomo) <sup>CD, OL</sup>

*Cardamine* (b) (CHR 312947; “tam”) <sup>CD, EF</sup>

*Cardamine* (d) (CHR 511706; Pisa Range) <sup>DP, RR</sup>

*Celmisia* aff. *gracilentia* (b) (CHR 469722; Mangaweka) <sup>OL</sup>

*Celmisia* aff. *similis* (AK 285874; Bald Knob Ridge) <sup>St</sup>

*Chaerophyllum colensoi* var. *delicatulum* (Allan) K.F.Chung <sup>DP, EF, RR</sup>

*Craspedia* (a) (CHR 511522; Clutha River) <sup>OL</sup>

*Craspedia* (e) (CHR 514391; “tarn”) <sup>CD, OL</sup>

*Craspedia* (h) (CHR 260312; Goulard Downs) <sup>OL</sup>

*Craspedia* (i) (CHR 395643; Fyfe River) <sup>CD, OL, St</sup>

*Craspedia* (j) (CHR 516302; Lake Heron) <sup>OL</sup>

*Craspedia* (l) (CHR 479212; Charleston) <sup>OL, Sp</sup>

*Craspedia* (o) (CHR 471883; Loveridge) <sup>OL, Sp</sup>

‡*Gentianella* aff. *calcis* subsp. *waipara* (CHR 569771; Earthquakes) <sup>DP, EF, OL</sup>

*Gingidia* aff. *montana* (a) (CHR 510570; Mount Burnett) <sup>CD, RR, St, Sp</sup>

*Hebe* aff. *bishopiana* (AK 202263; Hikurangi Swamp) <sup>CD, RR, Sp</sup>

*Hebe* aff. *brevifolia* (AK 235669; Surville Cliffs) <sup>OL</sup>

*Isoetes* aff. *kirkii* (CHR 247118A; Lake Omapere) <sup>OL</sup>

*Koeleria* aff. *novozelandica* (AK 252546; Awahokomo) <sup>OL</sup>

‡*Lepidium* aff. *flexicaule* (AK 294940; Chatham Islands) <sup>CD, EF, OL, TO</sup>

*Lepidium* aff. *oleraceum* (a) (AK 230459; Chatham Islands) <sup>CD, IE, RR</sup>

*Lepidium* aff. *oleraceum* (b) (AK 208579; Antipodes – Chathams Islands) <sup>DP, EF, RR</sup>

*Lepidium* aff. *oleraceum* (c) (CANU 5995; Snares Islands) <sup>IE, RR</sup>

*Leptinella* (a) (CHR 515297; Clutha River) <sup>Sp</sup>

*Limosella* (b) (CHR 515038; Manutahi) <sup>RR, St</sup>

*Linum monogynum* var. *chathamicum* G.Forst. (AK 303989) <sup>RR</sup>

Rosaceae

Ophioglossaceae

Asteraceae

Asteraceae

Orchidaceae

Brassicaceae

Brassicaceae

Brassicaceae

Asteraceae

Asteraceae

Apiaceae

Asteraceae

Asteraceae

Asteraceae

Asteraceae

Asteraceae

Asteraceae

Asteraceae

Gentianaceae

Apiaceae

Plantaginaceae

Plantaginaceae

Isoetaceae

Poaceae

Brassicaceae

Brassicaceae

Brassicaceae

Brassicaceae

Asteraceae

Plantaginaceae

Linaceae

**APPENDIX 2** (*continued*)

<i>Lobelia</i> aff. <i>angulata</i> (AK 212143; Woodhill) <sup>Sp</sup>	Lobeliaceae
<i>Melicytus</i> aff. <i>obovatus</i> (c) (CHR 393733; Mt. Owen) <sup>RR</sup>	Violaceae
<i>Microtis</i> aff. <i>unifolia</i> (CHR 532775; Fox) <sup>DP, OL</sup>	Orchidaceae
<i>Myosotis</i> (b) (CHR 386966; Mt. Tapuaenuku) <sup>DP, OL</sup>	Boraginaceae
<i>Nematoceras</i> aff. <i>rivulare</i> (AK 251833; Kaitarakihi) <sup>EF, OL</sup>	Orchidaceae
<i>Notothlaspi</i> (a) (CHR 363071; Red Hills) <sup>OL, St</sup>	Brassicaceae
<i>Pachycladon</i> aff. <i>fastigiata</i> (CHR 279206; Chalk Range) <sup>CD, OL</sup>	Brassicaceae
† <i>Parahebe</i> aff. <i>spathulata</i> (AK 301680; Ararimu Valley) <sup>DP</sup>	Plantaginaceae
<i>Pimelea</i> aff. <i>aridula</i> (a) (CHR 282959; Te Mata Peak) <sup>OL, RF</sup>	Thymelaeaceae
† <i>Pimelea</i> aff. <i>aridula</i> (CHR 277514; South Marlborough) <sup>DP, RR</sup>	Thymelaeaceae
<i>Pimelea</i> aff. <i>sericeovillosa</i> (CHR 467766; Cobb) <sup>RR, St</sup>	Thymelaeaceae
<i>Ranunculus</i> (a) (CHR 573506; Hope) <sup>OL, St</sup>	Ranunculaceae
<i>Ranunculus</i> (b) (CHR 324466; Burgoo Stream) <sup>St</sup>	Ranunculaceae
<i>Ranunculus</i> aff. <i>royi</i> (CHR 513327; Waihao) <sup>OL</sup>	Ranunculaceae
<i>Ranunculus</i> aff. <i>stylosus</i> (CHR 515131; Manahune) <sup>OL</sup>	Ranunculaceae
† <i>Senecio</i> aff. <i>glaucophyllus</i> (AK 253477; Mt Burnett) <sup>DP</sup>	Asteraceae
<i>Thelymitra</i> (a) (WELT 79140; Ahipara) <sup>DP, EF, RR</sup>	Orchidaceae
<i>Tmesipteris</i> aff. <i>tamensis</i> (CHR 496779; Banks Peninsula) <sup>DP, OL</sup>	Psilotaceae
<i>Trichomanes</i> (a) (AK 252983; Kerikeri) <sup>DP, OL</sup>	Hymenophyllaceae
<i>Trisetum</i> aff. <i>lepidum</i> (CHR 251835; Awahokomo) <sup>CD, EF, OL</sup>	Poaceae
<b>2. Nationally Endangered (9)</b>	
<i>Craspedia</i> (b) (CHR 516324; Leatham) <sup>CD, RR</sup>	Asteraceae
<i>Craspedia</i> (c) (CHR 529115; Kaitorete Spit) <sup>OL</sup>	Asteraceae
<i>Geranium</i> (b) (CHR 469918; Red Hills) <sup>RR, St</sup>	Geraniaceae
† <i>Gingidia</i> aff. <i>enysii</i> (CHR 515371; Clarence) <sup>DP</sup>	Apiaceae
<i>Melicytus</i> (a) (CHR 355077; Matiri Range) <sup>CD, RF, Sp</sup>	Violaceae
<i>Melicytus</i> aff. <i>alpinus</i> (b) (CHR 541565; Rangipo) <sup>DP, RF</sup>	Violaceae
<i>Melicytus</i> aff. <i>crassifolius</i> (CHR 279358; “cliff”) <sup>DP, RR</sup>	Violaceae
<i>Melicytus</i> aff. <i>obovatus</i> (b) (AK 229988; Mt. Burnett) <sup>CD, RR</sup>	Violaceae
<i>Pimelea</i> aff. <i>aridula</i> (b) (AK 230900; Cook Strait) <sup>DP, OL</sup>	Thymelaeaceae
<b>3. Nationally Vulnerable (3)</b>	
<i>Kirkianella</i> aff. <i>novae-zelandiae</i> (CHR 84044; “glaucous”) <sup>RR</sup>	Asteraceae
<i>Kunzea</i> aff. <i>ericoides</i> (d) (AK 255350; Thornton) <sup>CD, RR</sup>	Myrtaceae
<i>Pimelea</i> aff. <i>arenaria</i> (AK 216133; Southern New Zealand) <sup>DP</sup>	Thymelaeaceae
<b>At Risk (80)</b>	
<b>1. Declining (4)</b>	
<i>Christella</i> aff. <i>dentata</i> (b) (AK 126902; “thermal”) <sup>RR</sup>	Thelypteridaceae
† <i>Kunzea</i> aff. <i>ericoides</i> (a) (AK 286081; “sand”) <sup>DP, PD</sup>	Myrtaceae
<i>Melicytus</i> aff. <i>obovatus</i> (a) (AK 229988; Cook Strait) <sup>DP</sup>	Violaceae
<i>Raoulia</i> aff. <i>hookeri</i> (AK 239529; “coast”) <sup>RR</sup>	Asteraceae
<b>2. Recovering (2)</b>	
<i>Phormium</i> aff. <i>tenax</i> (CHR 503936; Chatham Islands) <sup>CD, IE, RR</sup>	Hemerocallidaceae
<i>Pittosporum</i> aff. <i>crassifolium</i> (AK 234236; Raoul Island) <sup>IE, OL</sup>	Pittosporaceae
<b>3. Relict (1)</b>	
<i>Sicyos</i> aff. <i>australis</i> (a) (AK 252822; New Zealand)	Cucurbitaceae
<b>4. Naturally Uncommon (73)</b>	
<i>Astelia</i> aff. <i>graminea</i> (CHR 129122; Red Hills) <sup>RR</sup>	Asteliaceae
<i>Astelia</i> aff. <i>nervosa</i> (a) (AK 108205; Mount Stokes) <sup>Sp</sup>	Asteliaceae
<i>Astelia</i> aff. <i>nervosa</i> (b) (CHR 355412; Stewart Island) <sup>RR</sup>	Asteliaceae
<i>Brachyscome</i> aff. <i>humilis</i> (AK 231703; West Dome) <sup>DP, RR, Sp</sup>	Asteraceae
<i>Cardamine</i> (c) (CHR 65058; Reporoa Bog) <sup>DP, RR</sup>	Brassicaceae

<i>Cardamine</i> (e) (AK 231673; West Dome) <sup>OL, Sp</sup>	Brassicaceae
<i>Cardamine</i> aff. <i>bilobata</i> (CHR 511915; eastern South Island) <sup>Sp</sup>	Brassicaceae
<i>Celmisia</i> aff. <i>discolor</i> (CHR 197967; Fiordland) <sup>DP, RR</sup>	Asteraceae
<i>Celmisia</i> aff. <i>gracilentata</i> (a) (CHR 282958; Te Mata Peak) <sup>RR</sup>	Asteraceae
<i>Celmisia</i> aff. <i>major</i> (AK 255352; Pupu) <sup>Sp</sup>	Asteraceae
<i>Chaerophyllum</i> (a) (CHR 364086; “minute flower”) <sup>Sp</sup>	Apiaceae
<i>Colobanthus</i> (b) (AK 232645; Red Hills) <sup>RR</sup>	Caryophyllaceae
<i>Colobanthus</i> aff. <i>wallii</i> (AK 232551; “serpentine”) <sup>RR, Sp</sup>	Caryophyllaceae
<i>Coprosma</i> aff. <i>acerosa</i> (AK 36799; Taranaki) <sup>RR, Sp</sup>	Rubiaceae
<sup>†</sup> <i>Coprosma</i> aff. <i>neglecta</i> (AK 221468; Maunganui Bluff) <sup>Sp</sup>	Rubiaceae
<i>Coprosma</i> aff. <i>neglecta</i> (AK 250769; Whangaroa) <sup>RR</sup>	Rubiaceae
<sup>†</sup> <i>Coprosma</i> aff. <i>propinqua</i> var. <i>martinii</i> (AK 281352; Chatham Islands) <sup>IE, RR</sup>	Rubiaceae
<i>Coriaria</i> (a) (CHR 469745; Rimutaka) <sup>Sp</sup>	Coriariaceae
<i>Craspedia</i> (f) (CHR 514362; Hackett River) <sup>EF, OL</sup>	Asteraceae
<i>Craspedia</i> (g) (CHR 469764; Pikikiruna Range) <sup>OL</sup>	Asteraceae
<i>Craspedia</i> (k) (CHR 283173; “coast”) <sup>RR</sup>	Asteraceae
<i>Craspedia</i> (n) (CHR 369978; Henderson) <sup>EF, OL</sup>	Asteraceae
<i>Craspedia</i> (p) (CHR 469073; Havelock River) <sup>RR</sup>	Asteraceae
<i>Craspedia</i> (q) (CHR 251905; Anglem) <sup>DP, RR</sup>	Asteraceae
<i>Craspedia</i> (r) (CHR 313349; Punakaiki) <sup>DP, RR, St</sup>	Asteraceae
<i>Craspedia</i> (s) (CHR 401645; “serpentine”) <sup>RR</sup>	Asteraceae
<i>Craspedia</i> (t) (CHR 365392; Chalk) <sup>RR</sup>	Asteraceae
<i>Craspedia</i> aff. <i>minor</i> (AK 228074; Chatham Island) <sup>IE, OL, Sp</sup>	Asteraceae
<i>Epilobium</i> aff. <i>glabellum</i> (CHR 387893; “pink”) <sup>RR</sup>	Onagraceae
<i>Euphrasia</i> (a) (CHR 471903; “white”) <sup>EF, OL</sup>	Orobanchaceae
<sup>†</sup> <i>Forstera</i> aff. <i>bidwillii</i> (CHR 396035; North-West Nelson) <sup>RR, Sp</sup>	Stylidiaceae
<i>Geranium</i> (a) (CHR 518296; Pareora River) <sup>DP, RR</sup>	Geraniaceae
<sup>†</sup> <i>Gingidia</i> aff. <i>enysii</i> (CHR 283817; Mt Brown) <sup>DP, RR</sup>	Apiaceae
<i>Hebe</i> aff. <i>albicans</i> (AK 252966; Mount Burnett) <sup>CD, OL</sup>	Plantaginaceae
<i>Hebe</i> aff. <i>ligustrifolia</i> (AK 207101; Surville Cliffs) <sup>Sp</sup>	Plantaginaceae
<i>Hebe</i> aff. <i>treadwellii</i> (CHR 394533; Bald Knob Ridge) <sup>OL</sup>	Plantaginaceae
<i>Helichrysum</i> aff. <i>intermedium</i> (CHR 274826; Chalk Range) <sup>RR</sup>	Asteraceae
<sup>†</sup> <i>Kunzea</i> aff. <i>ericoides</i> (e) (AK 226797; Three Kings) <sup>IE, OL</sup>	Myrtaceae
<sup>†</sup> <i>Kunzea</i> aff. <i>ericoides</i> var. <i>microflora</i> (AK 289816; Moutohora Island) <sup>IE, OL</sup>	Myrtaceae
<i>Lastreopsis</i> aff. <i>glabella</i> (AK 242151; Raoul Island) <sup>IE, OL</sup>	Dryopteridaceae
<i>Lepidium</i> aff. <i>oleraceum</i> (d) (AK 255607; Mangere) <sup>IE, RR</sup>	Brassicaceae
<i>Libertia</i> aff. <i>ixioides</i> (b) (CHR 174779; Omaha) <sup>RR</sup>	Iridaceae
<i>Libertia</i> aff. <i>peregrinans</i> (AK 14642; “nonaploid”) <sup>Sp</sup>	Iridaceae
<i>Meliclytus</i> aff. <i>novae-zelandiae</i> (CHR 89907; “maritime”) <sup>RR, Sp</sup>	Violaceae
<i>Meliclytus</i> aff. <i>ramiflorus</i> (b) (AK 234207; Raoul Island) <sup>IE, OL</sup>	Violaceae
<sup>†</sup> <i>Microseris</i> aff. <i>scapigera</i> (CHR 78205; Brothers Islands) <sup>IE, OL, St</sup>	Asteraceae
<i>Myosotis</i> (a) (CHR 320240; Mossburn) <sup>RR</sup>	Boraginaceae
<i>Myosotis</i> aff. <i>australis</i> (CHR 192301; “small white”) <sup>Sp</sup>	Boraginaceae
<i>Myosotis</i> aff. <i>brockiei</i> (CHR 497375; Lake Otuhiē) <sup>RR</sup>	Boraginaceae
<i>Myosotis</i> aff. <i>pygmaea</i> (CHR 244566; Volcanic Plateau) <sup>EF, RR, Sp</sup>	Boraginaceae
<i>Myosotis</i> aff. <i>tenericaulis</i> (AK 7570; Garvie) <sup>RR, Sp</sup>	Boraginaceae
<i>Nematoceras</i> aff. <i>rivulare</i> (CHR 534752; “rest area”) <sup>DP, Sp</sup>	Orchidaceae
<i>Nematoceras</i> aff. <i>sulcatum</i> (CHR 300648; Chatham Islands) <sup>IE, RR</sup>	Orchidaceae
<i>Nematoceras</i> aff. <i>trilobum</i> (CHR 534742; Trotters Gorge) <sup>DP, Sp</sup>	Orchidaceae
<i>Nematoceras</i> aff. <i>trilobum</i> (CHR 537604; Rimutaka) <sup>Sp</sup>	Orchidaceae
<i>Ourisia</i> aff. <i>caespitosa</i> (CHR 395703; Hope Range) <sup>RR, Sp</sup>	Plantaginaceae
<i>Oxalis</i> aff. <i>rubens</i> (AK 234308; “scree”) <sup>Sp</sup>	Oxalidaceae
<i>Phyllocladus</i> aff. <i>trichomanoides</i> (AK 138439; Surville Cliffs) <sup>OL</sup>	Phyllocladaceae
<i>Pimelea</i> (b) (AK 165780; Mt. Manaia) <sup>RR</sup>	Thymelaeaceae
<i>Pimelea</i> (c) (CHR 511713; “tam”) <sup>RR</sup>	Thymelaeaceae
<i>Pimelea</i> (d) (CHR 472016; Pisa) <sup>DP, RR</sup>	Thymelaeaceae
<i>Pimelea</i> aff. <i>aridula</i> (c) (CHR 402249; Moawhango) <sup>OL, St</sup>	Thymelaeaceae
<i>Pimelea</i> aff. <i>aridula</i> (d) (CHR 221089; Maungaharuru) <sup>RR</sup>	Thymelaeaceae
<i>Pimelea</i> aff. <i>tomentosa</i> (b) (AK 130893; Surville cliffs) <sup>OL</sup>	Thymelaeaceae



## APPENDIX 2 (continued)

<sup>†</sup> <i>Polystichum</i> aff. <i>vestitum</i> (AK 230427–8; Chatham Islands) <sub>IE, RR</sub>	Dryopteridaceae
<i>Pseudopanax</i> aff. <i>lessonii</i> (AK 46066; Surville Cliffs) <sub>SP</sub>	Araliaceae
<i>Pterostylis</i> aff. <i>graminea</i> (CHR 513330; “sphagnum”) <sub>SP</sub>	Orchidaceae
<sup>†</sup> <i>Raoulia</i> (c) (CHR 401140; “M”) <sub>SP</sub>	Asteraceae
<i>Rubus</i> aff. <i>schmidelioides</i> (CHR 325720; “strawberry”) <sub>RR</sub>	Rosaceae
<sup>†</sup> <i>Senecio</i> aff. <i>glomeratus</i> (CHR 592398; Chatham Islands) <sub>IE, RR</sub>	Asteraceae
<i>Stellaria</i> aff. <i>parviflora</i> (AK 169580; Poor Knights) <sub>SP</sub>	Caryophyllaceae
<i>Thelymitra</i> (c) (CHR 518036; “tough leaf”) <sub>SP</sub>	Orchidaceae
<i>Thelymitra</i> aff. <i>ixioides</i> (AK 251348; New Zealand) <sub>SP</sub>	Orchidaceae

## Non-Resident Native (1)

## 1. Coloniser (1)

<sup>†</sup> <i>Sicyos</i> aff. <i>australis</i> (b) (AK 289786; Mangere stonefields) <sub>EF, RR, TO</sub>	Cucurbitaceae
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## Data Deficient (26)

<i>Brachyglottis rotundifolia</i> var. <i>ambigua</i> (Cheeseman) B. Nord. (AK 251870)	Asteraceae
<i>Dracophyllum</i> (a) (Venter 13745; Mt Rochfort)	Ericaceae
<sup>†</sup> <i>Geranium</i> (c) (CHR 546319; Von)	Geraniaceae
<sup>†</sup> <i>Gingidia</i> aff. <i>montana</i> (CHR 505502; Mt Cook)	Apiaceae
<sup>†</sup> <i>Luzula</i> aff. <i>rufa</i> (CHR 401089; Cobb)	Juncaceae
<i>Melicytus</i> aff. <i>alpinus</i> (c) (CHR 541568; Otago)	Violaceae
<i>Melicytus</i> aff. <i>alpinus</i> (d) (CHR 541567; “dark”)	Violaceae
<i>Melicytus</i> aff. <i>alpinus</i> (f) (CHR 530143; Brockie)	Violaceae
<i>Melicytus</i> aff. <i>alpinus</i> (g) (CHR 514919B; Livingstone)	Violaceae
<i>Myosotis</i> (c) (CHR 198630; Fiordland)	Boraginaceae
<sup>†</sup> <i>Myosotis</i> aff. <i>australis</i> (CHR 572827; Lammerlaw) <sub>SP</sub>	Boraginaceae
<i>Myosotis</i> aff. <i>pulvinaris</i> (CHR 431563; Umbrella)	Boraginaceae
<i>Pachystegia</i> aff. <i>insignis</i> (CHR 565298; Lowry)	Asteraceae
<i>Pimelea</i> (f) (AK 189577; Maunganui Bluff) <sub>OL</sub>	Thymelaeaceae
<sup>†</sup> <i>Pimelea</i> (g) (CHR 358213; Te Tai Tapu)	Thymelaeaceae
<i>Pimelea</i> aff. <i>prostrata</i> (CHR 257898; Kaitorete) <sub>OL</sub>	Thymelaeaceae
<sup>†</sup> <i>Pimelea prostrata</i> var. <i>erecta</i> Cheeseman (AK 5407) <sub>DP</sub>	Thymelaeaceae
<i>Poa</i> aff. <i>sublimis</i> (CHR 402510; Eyre Mountains) <sub>OL</sub>	Poaceae
<i>Ranunculus</i> (c) (CHR 472008; Garvie Range)	Ranunculaceae
<i>Ranunculus</i> aff. <i>reflexus</i> (CHR 394270; Mount Peel)	Ranunculaceae
<i>Raoulia</i> (a) (CHR 79537; “K”)	Asteraceae
<i>Raoulia</i> aff. <i>bryoides</i> (CHR 395372; “L”)	Asteraceae
<i>Schizeilema</i> (a) (CHR 190698; Ruahine)	Araliaceae
<sup>†</sup> <i>Senecio</i> aff. <i>dunedinensis</i> (CHR 550250; Leatham) <sub>DP</sub>	Asteraceae
<i>Spiranthes</i> aff. <i>novae-zealandiae</i> (CHR 518297; Motutangi)	Orchidaceae
<i>Thelymitra</i> aff. <i>longifolia</i> (CHR 537579; Whakapapa)	Orchidaceae

**APPENDIX 3** Taxonomically determinate (1) and indeterminate (2) plants previously listed by de Lange et al. (2004) but which, for the reasons specified, are no longer considered to be threatened.

<sup>1</sup>Ecology and distribution better understood

<sup>2</sup>Adventive

<sup>3</sup>More abundant than previously believed

<sup>4</sup>Taxonomically indistinct

<sup>5</sup>Unsupported by herbarium evidence

### 1. Not Threatened (taxonomically determinate) (44)

<i>Acaena buchananii</i> Hook.f. <sup>1,3</sup>	Rosaceae
<i>Astelia nivicola</i> var. <i>moriceae</i> L.B.Moore <sup>1,3</sup>	Asteliaceae
<i>Carex kirkii</i> var. <i>elator</i> Kük. <sup>4</sup>	Cyperaceae
<i>Carex muelleri</i> Petrie <sup>1,3</sup>	Cyperaceae
<i>Carex raoulii</i> Boott <sup>1,3</sup>	Cyperaceae
<i>Carex tahoata</i> Hamlin <sup>4</sup>	Cyperaceae
<i>Chionochloa acicularis</i> Zotov <sup>1,3</sup>	Poaceae
<i>Chionochloa ovata</i> (Buchanan) Zotov <sup>1,3</sup>	Poaceae
<i>Clematis quadribracteolata</i> Colenso <sup>3</sup>	Ranunculaceae
<i>Crassula humua</i> A.P.Druce <sup>4</sup>	Crassulaceae
<i>Dianella latissima</i> Heenan et de Lange <sup>3</sup>	Hemerocallidaceae
<i>Epilobium chionanthum</i> Hausskn. <sup>3</sup>	Onagraceae
<i>Geum pusillum</i> Petrie <sup>1,3</sup>	Rosaceae
<i>Hebe elliptica</i> var. <i>crassifolia</i> Cockayne et Allan <sup>4</sup>	Plantaginaceae
<i>Hebe matthewsii</i> (Cheeseman) Cockayne <sup>4</sup>	Plantaginaceae
<i>Hebe pubescens</i> subsp. <i>pubescens</i> (Benth.) Cockayne et Allan <sup>1,3</sup>	Plantaginaceae
<i>Hierochloa fusca</i> Zotov <sup>1,3</sup>	Poaceae
<i>Hymenochilus tanypoda</i> <sup>1,3</sup>	Orchidaceae
<i>Isolepis crassiuscula</i> Hook.f. <sup>1,3</sup>	Cyperaceae
<i>Jovellana sinclairii</i> (Hook.) Kraenzl. <sup>1,3</sup>	Calceolariaceae
<i>Lepidium desvauxii</i> Thell. <sup>1,3</sup>	Brassicaceae
<i>Lepidium sisymbrioides</i> subsp. <i>kawarau</i> (Petrie) Thell. <sup>4</sup>	Brassicaceae
<i>Lepidium sisymbrioides</i> subsp. <i>matau</i> (Petrie) Thell. <sup>4</sup>	Brassicaceae
<i>Leptinella dioica</i> subsp. <i>monoica</i> (D.G.Lloyd) D.G.Lloyd et C.J.Webb <sup>4</sup>	Asteraceae
<i>Leptinella intermedia</i> D.G.Lloyd <sup>4</sup>	Asteraceae
<i>Lobelia glaberrima</i> Heenan <sup>1,3</sup>	Lobeliaceae
<i>Microsorium novae-zelandiae</i> (Baker) Copel. <sup>3</sup>	Polypodiaceae
<i>Mida salicifolia</i> A.Cunn. <sup>3</sup>	Santalaceae
<i>Myosotis spathulata</i> var. <i>radicata</i> L.B.Moore <sup>4</sup>	Boraginaceae
<i>Ourisia gouldiana</i> Arroyo <sup>4</sup>	Plantaginaceae
<i>Pachycladon enysii</i> (Cheeseman) Heenan et A.D.Mitch. <sup>3</sup>	Brassicaceae
<i>Pachycladon fastigiata</i> (Hook.f.) Heenan et A.D.Mitch. <sup>1,3</sup>	Brassicaceae
<i>Pimelea crosby-smithiana</i> Petrie <sup>4</sup>	Thymelaeaceae
<i>Pseudopanax laetus</i> (Kirk) Philipson <sup>1,3</sup>	Araliaceae
<i>Ranunculus mirus</i> Garn.-Jones <sup>1,3</sup>	Ranunculaceae
<i>Raukawa edgerleyi</i> (Hook.f.) Seem. <sup>1,3</sup>	Araliaceae
<i>Rumex neglectus</i> Kirk <sup>1,3</sup>	Polygonaceae
<i>Rytidosperma nudum</i> (Hook.f.) Connor et Edgar <sup>4</sup>	Poaceae
<i>Rytidosperma tenue</i> (Petrie) Connor et Edgar <sup>4</sup>	Poaceae
<i>Sticherus flabellatus</i> (R.Br.) H.St.John <sup>1,3</sup>	Gleicheniaceae
<i>Thelymitra tholiformis</i> Molloy et Hatch <sup>1,3</sup>	Orchidaceae
<i>Tmesipteris sigmatifolia</i> Chinnock <sup>1,3</sup>	Psilotaceae
<i>Vittadinia australis</i> A.Rich. <sup>1,3</sup>	Asteraceae
<i>Wahlenbergia pygmaea</i> subsp. <i>tararua</i> J.A.Pettersen <sup>4</sup>	Campanulaceae

### 2. Not Threatened (taxonomically indeterminate) (26)

<i>Agrostis</i> (a) (CHR 402485; Dunstan Range) <sup>1,3</sup>	Poaceae
<i>Craspedia</i> (d) (CHR 245893; Otakeho) <sup>1,4</sup>	Asteraceae
<i>Deyeuxia</i> aff. <i>quadriseta</i> (AK 252511; Volcanic Plateau) <sup>1,3</sup>	Poaceae

## APPENDIX 3 (continued)

<i>Elymus</i> aff. <i>solandri</i> (a) (AK 222754; "channel") <sup>4</sup>	Poaceae
<i>Elymus</i> aff. <i>solandri</i> (b) (CHR 1613; South Marlborough) <sup>2</sup>	Poaceae
<i>Festuca</i> aff. <i>novae-zelandiae</i> (AK 252541; Awahokomo) <sup>4</sup>	Poaceae
<i>Galium</i> aff. <i>perpusillum</i> (CHR 476063; Kaitorete) <sup>4</sup>	Rubiaceae
<i>Grammitis</i> aff. <i>rawlingsii</i> (a) (CHR 420132; Great Barrier) <sup>4</sup>	Grammitidaceae
<i>Grammitis</i> aff. <i>rawlingsii</i> (b) (AK 236942; Mt William) <sup>4</sup>	Grammitidaceae
<i>Hebe</i> aff. <i>diosmifolia</i> (AK 215221; "summer flowering tetraploid") <sup>4</sup>	Plantaginaceae
<i>Hebe</i> aff. <i>pinguifolia</i> (CHR 461354; "high flyer") <sup>4</sup>	Plantaginaceae
<i>Helichrysum</i> aff. <i>aggregatum</i> (AK 54473; Surville Cliffs) <sup>4</sup>	Asteraceae
<i>Hoheria</i> aff. <i>sexstylosa</i> (AK 234306; Tararua Ranges) <sup>4</sup>	Malvaceae
<i>Libertia</i> aff. <i>ixioides</i> (a) (CHR 469712; "large capsule") <sup>4</sup>	Iridaceae
<i>Limosella</i> (a) (CHR 222625; Opunake) <sup>4</sup>	Plantaginaceae
<i>Melicytus</i> aff. <i>alpinus</i> (e) (CHR 541566; Waipapa) <sup>1,3</sup>	Violaceae
<i>Melicytus</i> aff. <i>alpinus</i> (i) (CHR 541569; Blondin) <sup>1,3</sup>	Violaceae
<i>Melicytus</i> aff. <i>ramiflorus</i> (a) (AK 207155; Three Kings) <sup>4</sup>	Violaceae
<i>Nematoceras</i> aff. <i>rivulare</i> (CHR 518025; Kaimai) <sup>1,3</sup>	Orchidaceae
<i>Nematoceras</i> aff. <i>rivulare</i> (CHR 518313; "whiskers") <sup>1,3</sup>	Orchidaceae
<i>Nematoceras</i> aff. <i>trilobum</i> (CHR 518304; "pygmy") <sup>1,3</sup>	Orchidaceae
<i>Peperomia</i> aff. <i>urvilleana</i> (AK 206056; "purple vein") <sup>4</sup>	Piperaceae
<i>Pseudognaphalium</i> (a) (CHR 365358; Zoo) <sup>4</sup>	Asteraceae
<i>Pteris</i> aff. <i>macilenta</i> (AK 210045; Punakaiki) <sup>1,3</sup>	Pteridaceae
<i>Rhopalostylis</i> aff. <i>sapida</i> (AK 227148; Chatham Islands) <sup>4</sup>	Arecaceae
<i>Thelymitra</i> (b) (CHR 518036; "darkie") <sup>1,3</sup>	Orchidaceae

## APPENDIX 4 Nomenclature changes affecting taxa listed by de Lange et al. (2004).

## de Lange et al. (2004)

*Achyranthes aspera* L.  
*Boehmeria australis* var. *dealbata* (Cheeseman) Sykes

*Carex* (a) (CHR 395744; Takaka)  
*Carex* (b) (AK 232856; Matiri)  
*Chiloglottis trapeziformis* Fitz.

*Chiloglottis trapeziformis* Fitz.

*Corallospartium crassicaule* var. *racemosum* Kirk

*Cordyline kaspar* W.R.B. Oliv.  
*Crassula humua* A.P.Druce

*Crassula ruamahanga* A.P.Druce

*Dianella* aff. *nigra* (a) (AK 256873; Hauturu)  
*Dianella* aff. *nigra* (b) (AK 252991; Kopouatai)  
*Eryngium* aff. *vesiculosum* (AK 232583; New Zealand)  
*Gentiana antarctica* Kirk  
*Gentiana antipoda* Kirk  
*Gentiana bellidifolia* var. *magnifica* Kirk  
*Gentiana cerina* Hook.f.  
*Gentiana chathamica* Cheeseman

*Gentiana concinna* Hook.f.  
*Gentiana filipes* Cheeseman

## This paper

*Achyranthes velutina* Moq.  
*Boehmeria australis* subsp. *dealbata* (Cheeseman) de Lange et Sykes  
*Carex cremnicola* K.A.Ford  
*Carex calcis* K.A.Ford  
*Myrmecophila formicifera* (Fitzg.) D.L.Jones et M.A.Clem. *pro. parte*  
*M. trapeziformis* (Fitzg.) D.L.Jones et M.A.Clem. *pro. parte*  
*Carmichaelia crassicaulis* subsp. *racemosa* (Kirk) Heenan  
*Cordyline obtecta* (Graham) Baker  
*Crassula ruamahanga* A.P.Druce emend. de Lange et Heenan  
*Crassula ruamahanga* A.P.Druce emend. de Lange et Heenan  
*Dianella latissima* Heenan et de Lange  
*Dianella haemata* Heenan et de Lange  
*Eryngium vesiculosum* Labill.  
*Gentianella antarctica* (Kirk) T.N.Ho et S.W.Liu  
*Gentianella antipoda* (Kirk) T.N.Ho et S.W.Liu  
*Gentianella magnifica* (Kirk) Glenney  
*Gentianella cerina* (Hook.f.) T.N.Ho et S.W.Liu  
*Gentianella chathamica* (Cheeseman) T.N.Ho. et S.W.Liu subsp. *chathamica*  
*Gentianella concinna* (Hook.f.) T.N.Ho et S.W.Liu  
*Gentianella filipes* (Cheeseman) T.N.Ho et S.W.Liu

- Gentiana gibbsii* Petrie  
*Gentiana lilliputiana* C. Webb  
*Gentiana lineata* Kirk  
*Gentiana* aff. *astonii* (a) (CHR 529112; Mt Brown)  
*Gentiana* aff. *astonii* (b) (CHR 529111; Pareora River)  
*Gentiana* aff. *astonii* (c) (CHR 542276; Manahune)  
*Gentiana* aff. *astonii* (c) (CHR 519113; Awahokomo)  
*Gentiana* aff. *astonii* (d) (CHR 529114; Ward)  
*Gentiana* aff. *astonii* (f) (CHR 279272; Chalk Range)  
*Gentiana* aff. *saxosa* (AK 7316; Charleston)  
*Gentiana* aff. *tenuifolia* (CHR 387194; “stellar”)  
*Gentiana* (a) (CHR 395723; Lookout Range)  
*Geniostoma ligustrifolium* var. *maius* Cheeseman  
*Gingidia* aff. *montana* (b) (CHR 103349; North Otago)  
*Gratiola nana* R.Br.  
*Hebe cupressoides* (Hook.f.) Cockayne et Allan *nom. illegit.*  
*Hebe* sp. (*Veronica salicifolia* var. *angustissima* Cockayne) (AK 233637)  
*Hibiscus diversifolius* Jacq.  
*Hibiscus* aff. *trionum* (AK 218967; North Island)  
*Hydatella inconspicua* (Cheeseman) Cheeseman  
*Hypericum* aff. *japonicum* (a) (CHR 165889; Volcanic Plateau)  
*Hypericum* aff. *japonicum* (b) (CHR 140620; “tarn”)  
*Hymenophyllum* aff. *flexuosum* (AK 177370; Mt Burnett)  
*Hypsela* aff. *rivalis* (CHR 369981; Burgoon Stream)  
*Isolepis fluitans* (L.) R.Br.  
*Kirkianella novae-zelandiae* f. *glauca* Allan *nom. nud.*  
  
*Kunzea* aff. *ericoides* (a) (AK 255350; Thornton)  
*Lepidium sisymbrioides* subsp. *kawarau* (Petrie) Thell.  
*Lepidium sisymbrioides* subsp. *mataui* (Petrie) Thell.  
*Lepidium sisymbrioides* Hook.f. subsp. *sisymbrioides*  
*Lepidium* aff. *oleraceum* (b) (AK 208579; Antipodes)  
  
*Marattia salicina* J.E.Sm. in Rees  
*Myrsine* aff. *divaricata* (AK 228797; Poor Knights)  
*Nematoceras rivularis* (A.Cunn.) Hook.f.  
*Nematoceras* aff. *rivularis* (CHR 534752; “rest area”)  
*Nematoceras* aff. *rivularis* (CHR 518313; “whiskers”)  
*Nematoceras* aff. *rivularis* (CHR 518025; Kaimai)  
*Nematoceras* aff. *rivularis* (AK 251833; Kaitarakihi)  
*Nematoceras* aff. *trilobus* (CHR 518304; “pygmy”)  
*Nematoceras* aff. *trilobus* (CHR 537604; Rimutaka)  
*Nematoceras* aff. *trilobus* (CHR 534742; Trotters)  
  
*Neopaxia drucei* Heenan  
*Neopaxia linearifolia* Heenan  
*Neopaxia racemosa* (Buchanan) Heenan  
*Nephrolepis* (a) (AK 232904; “thermal”)  
*Olearia* aff. *odorata* (CHR 386084; Canterbury Plains)  
*Oreomyrrhis colensoi* var. *delicatula* Allan  
  
*Oreomyrrhis* (a) (CHR 364086; “minute flower”)  
*Paracaleana minor* (R.Br.) Blaxell  
*Parahebe* aff. *catarractae* (CHR 324810; “hairy”)  
*Pomaderris phyllicifolia* Lodd.  
*Picris burbridgei* S.Holzapfel  
  
*Gentianella gibbsii* (Petrie) T.N.Ho et S.W.Liu  
*Gentianella lilliputiana* (C.Webb) Glenny  
*Gentianella lineata* (Kirk) T.N.Ho et S.W.Liu  
*Gentianella calcis* subsp. *waipara* Glenny et Molloy  
*Gentianella calcis* subsp. *taiko* Glenny et Molloy  
*Gentianella calcis* subsp. *manahune* Glenny et Molloy  
*Gentianella calcis* Glenny et Molloy subsp. *calcis*  
*Gentianella astonii* subsp. *arduana* Glenny et Molloy  
*Gentianella astonii* subsp. *arduana* Glenny et Molloy  
*Gentianella scopulorum* Glenny  
*Gentianella stellata* Glenny  
*Gentianella luteoalba* Glenny  
*Geniostoma ligustrifolium* var. *majus* Cheeseman  
*Gingidia grisea* Heenan  
*Gratiola concima* Colenso  
*Leonohebe cupressoides* (Hook.f.) Heads  
  
*Hebe angustissima* (Cockayne) Bayley et Kellow  
  
*Hibiscus diversifolius* Jacq. subsp. *diversifolius*  
*Hibiscus richardsonii* Lindl.  
*Trithuria inconspicua* Cheeseman  
*Hypericum minutiflorum* Heenan  
  
*Hypericum rubicundulum* Heenan  
*Hymenophyllum australe* Willd.  
*Lobelia fugax* Heenan, S.P.Courtney et P.N.Johnson  
*Isolepis fluitans* (L.) R.Br. var. *fluitans*  
*Kirkianella* aff. *novae-zelandiae* (CHR 84044; “glaucous”)  
*Kunzea* aff. *ericoides* (d) (AK 255350; Thornton)  
*Lepidium sisymbrioides* Hook.f.  
*Lepidium solandri* Kirk  
*Lepidium solandri* Kirk  
*Lepidium* aff. *oleraceum* (b) (AK 208579; Antipodes – Chathams Islands)  
*Ptisana salicina* (J.E.Sm.) Murdock  
*Myrsine aquilonia* de Lange et Heenan  
*Nematoceras rivulare* (A.Cunn.) Hook.f.  
*Nematoceras* aff. *rivulare* (CHR 534752; “rest area”)  
*Nematoceras* aff. *rivulare* (CHR 518313; “whiskers”)  
*Nematoceras* aff. *rivulare* (CHR 518025; Kaimai)  
*Nematoceras* aff. *rivulare* (AK 251833; Kaitarakihi)  
*Nematoceras* aff. *trilobum* (CHR 518304; “pygmy”)  
*Nematoceras* aff. *trilobum* (CHR 537604; Rimutaka)  
*Nematoceras* aff. *trilobum* (CHR 534742; Trotters Gorge)  
*Montia drucei* (Heenan) Heenan  
*Montia angustifolia* Heenan  
*Montia racemosa* (Buchanan) Heenan  
*Nephrolepis flexuosa* Colenso  
*Olearia adenocarpa* Molloy et Heenan  
*Chaerophyllum colensoi* var. *delicatulum* (Allan) K.F.Chung  
*Chaerophyllum* (a) (CHR 364086; “minute flower”)  
*Sullivania minor* (R.Br.) D.L.Jones et M.A.Clem.  
*Parahebe senex* Garn.-Jones  
*Pomaderris phyllicifolia* Lodd. subsp. *phyllicifolia*  
*Picris burbridgeae* S.Holzapfel

## APPENDIX 4 (continued)

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<i>Pilularia novae-zelandiae</i> Kirk	<i>Pilularia novae-hollandiae</i> A.Braun
<i>Pimelea</i> (a) (CHR 495025; Turakina)	<i>Pimelea actea</i> C.J.Burrows
<i>Pimelea</i> aff. <i>tomentosa</i> (c) (AK 228145; Three Kings)	<i>Pimelea telura</i> C.J.Burrows
<i>Pittosporum pimeleoides</i> subsp. <i>maius</i> (Cheeseman) R.C.Cooper	<i>Pittosporum pimeleoides</i> subsp. <i>majus</i> (Cheeseman) R.C.Cooper
<i>Plagianthus chathamicus</i> Cockayne	<i>Plagianthus regius</i> subsp. <i>chathamicus</i> (Cockayne) de Lange
<i>Poa anceps</i> subsp. <i>polyphylla</i> (Hack.) Edgar	<i>Poa polyphylla</i> Hack.
<i>Potamogeton pectinatus</i> L.	<i>Stuckenia pectinata</i> (L.) Börner
<i>Prasophyllum</i> aff. <i>patens</i> (AK 236408; New Zealand)	<i>Prasophyllum hectorii</i> (Buchanan) Molloy, D.L.Jones et M.A.Clem.
<i>Pratia</i> aff. <i>macrodon</i> (AK 255606; Old Man Range)	<i>Lobelia glaberrima</i> Heenan
<i>Puccinellia walkeri</i> subsp. <i>antipoda</i> (Petrie) Edgar	<i>Puccinellia antipoda</i> Petrie
<i>Puccinellia walkeri</i> subsp. <i>chathamica</i> (Cheeseman) Edgar	<i>Puccinellia chathamica</i> Cheeseman
<i>Puccinellia walkeri</i> (Kirk) Allan subsp. <i>walkeri</i>	<i>Puccinella walkeri</i> (Kirk) Allan
<i>Ranunculus recens</i> var. <i>lacustris</i> G.Simpson	<i>Ranunculus ranceorum</i> de Lange
<i>Ranunculus recens</i> Kirk var. <i>recens</i>	<i>Ranunculus recens</i> Kirk
<i>Rhopalostylis cheesemanii</i> Becc.	<i>Rhopalostylis baueri</i> (Seem.) H.Wendl. et Drude
<i>Solanum aviculare</i> f. <i>latifolium</i> G.T.S.Baylis <i>nom. nud.</i>	<i>Solanum aviculare</i> var. <i>latifolium</i> G.T.S.Baylis

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