
New Zealand Botanical Society THREATENED AND LOCAL PLANT LISTS (1995 Revision)

E.K. Cameron¹, P.J. de Lange², D.R. Given³, P.N. Johnson⁴, C.C. Ogle⁵

¹ Auckland Institute and Museum, Private Bag 92018, Auckland

² Science and Research Division, Department of Conservation, Private Bag 68908, Newton, Auckland

³ 101 Jeffreys Road, Christchurch 5

⁴ Manaaki-Whenua, Landcare Research, Private Bag 1930, Dunedin

⁵ Wanganui Conservancy, Department of Conservation, Private Bag, Wanganui

ABSTRACT

A revision of the 1993 New Zealand Threatened and Local plant lists is presented. A total of 319 vascular plant taxa are considered at risk within the New Zealand botanical region using existing IUCN Red Data Book categories of threat. Threatened taxa are distributed as follows; Presumed Extinct 9 taxa, Critical 20 taxa, Endangered 37 taxa, Vulnerable 62 taxa, Rare 79 taxa, Insufficiently Known 28 taxa, Taxonomically Indeterminate 84 taxa. Within the New Zealand category of Local, 142 taxa are listed. Fifty taxa listed by Cameron *et al.* (1993) as under some level of threat have been deleted from this list.

INTRODUCTION

Cameron *et al.* (1993) provided the first substantial revision of the New Zealand Threatened Plant lists since the listing of such taxa was first initiated by the Native Plant Protection Society (Given 1981). This revision is a continuation of that process by the New Zealand Threatened Plants Committee.

The Revision Process

A call for submissions on candidate taxa and threat categories was made by Cameron *et al.* (1993). By the deadline date of 31 January 1994 a total of 72 submissions dealing with 183 taxa was received by P.J. de Lange, the Threatened Plant Committee Convenor. Prior to the meeting most submissions were summarised and circulated to the committee for comment. Revision occurs by the majority decision of the committee. The quality of submissions was variable and considerable time was needed to clarify points raised in some of the submissions.

As with the previous revision it was agreed that all submissions received become the joint property of the New Zealand Botanical Society and the submitting author(s). Submissions are held on file by the committee convenor. We would ask that those seeking to use information contained within these submissions, obtain either the permission of the New Zealand Botanical Society Committee or the submission author(s).

Criteria for Selection

The lists are for vascular plant taxa (species, subspecies, varieties) believed to be indigenous to the New Zealand Botanical Region, see Cameron *et al.* (1993). Included are plants which are indigenous also to overseas countries, where they may or may not be considered threatened, e.g. *Caleana minor*, *Lepturus repens* and *Peperomia leptostachya*.

The present revision comprises three distinct lists. The list of Threatened Plants concentrates on taxa which are at risk nationally, using the IUCN Red Data Book categories outlined below. The second list of Local Plants (not an IUCN category) contains taxa sufficiently restricted in distribution to warrant monitoring. The third list covers those taxa previously listed as either Threatened or Local, which based on present evidence have been deleted from the above lists.

Threat Categories

The threat categories are those used by the Species Survival Commission of the International Union for Conservation of Nature (IUCN). These categories are:

Presumed Extinct

Vulnerable

Taxonomically Indeterminate

Endangered

Rare

Insufficiently Known

Two additional categories are used here. These are the newly proposed IUCN category **Critical** (Mace *et al.*, 1993) which is defined in that document, and the non-IUCN category **Local** - which is defined by Cameron *et al.* (1993). Our use of Critical is in partial acceptance of the proposed revision of IUCN Threat Categories by Mace *et al.* (1993). We see merit in the recognition of such a category which indicates a high probability of extinction of the candidate taxa. Our use, we hope, will act as a clear guideline enabling conservation bodies to direct their resources more effectively. We see little value in accepting the proposed category of susceptible (which would replace rare, see Mace *et al.*, 1993) until such time as the ambiguity of its definition and application has been clarified.

Nomenclature

The treatment adopted for taxa follows that outlined by Cameron *et al.* (1993): As with the previous revision the lists contain a large number (85) of undescribed taxa. This is because many of these are under some level of threat and their conservation should not be precluded by lack of formal name (Cameron *et al.*, 1993). Undescribed taxa are admitted to the main list, as opposed to the Taxonomically Indeterminate list, if in the opinion of the committee they are "good entities".

Nomenclature changes affecting taxa listed by Cameron *et al.* (1993)

Cameron <i>et al.</i> (1993):	This Revision:
<i>Deschampsia caespitosa</i>	<i>Deschampsia caespitosa</i> var. <i>macrantha</i> (Cheeseman 1906)
<i>Hebe "George"</i>	<i>Heliohebe acuta</i> (Garnock-Jones 1993)
<i>Hebe raoulii</i> var. <i>maccaskillii</i>	<i>Heliohebe raoulii</i> var. <i>maccaskillii</i> (Garnock-Jones 1993)
<i>Meliccytus "flexuose"</i>	<i>Meliccytus flexuosus</i> (Molloy and Druce 1992)
<i>Myoporum debile</i>	<i>Eremophila debilis</i> (Chinnock 1992)
<i>Pterostylis plumosa</i>	<i>Pterostylis tasmanica</i> (Jones 1994)

The taxon known as "X" previously considered in the Elatinaceae (Cameron *et al.* 1993) is now placed within the Cunoniaceae (P.J. Garnock-Jones, G.M. Timmerman & S.J. Wagstaff pers. comm., 1994).

Newly described taxa

Drymoanthus flavus (Molloy & St George 1994)
Picris angustifolia subsp. *merxmulleri* (Holzapfel & Lack 1993)
Picris burbridgei (Holzapfel & Lack 1993)

Comparison with Previous List

This revision recognises 319 threatened taxa using available IUCN Red Data Book Threat Categories. A further 142 taxa are ranked as Local, providing a combined total of 461 taxa under some level of threat within the New Zealand Botanical Region. Fifty taxa previously considered threatened or Local are deleted. Fifty-one taxa are listed for the first time in the Threatened Plant List (30 of these undescribed) while 30 are new listings for the Local Plant List (6 of these undescribed).

These changes represent an increase of 23 taxa on the figures reported by Cameron *et al.* (1993). Based on current estimates of our flora (Druce 1993) 19% of the New Zealand flora is now under some level of threat. When each of the threat categories is considered in relation to 1993 figures it is encouraging to see an overall decrease in the numbers of taxa within the higher categories of threat. The major increase in the size of the threatened plant list has been within those taxa which are taxonomically indeterminate. The committee would like to stress the point that funds to research these taxa, especially their taxonomic status, are urgently needed. Under present funding, taxonomy, like many of these undescribed taxa, is under threat. With the present global conservation emphasis based on the need to protect indigenous biodiversity, it is ironic that taxonomy, the keystone to recognising diversity, remains under-funded.

Finally, the committee would like to urge list users to become familiar with those taxa presently ranked as Insufficiently Known or Taxonomically Indeterminate. Without their assistance the status of these taxa will remain in doubt. With this in mind, the committee is preparing an annotated list for those taxonomically indeterminate and unnamed taxa to assist with further field studies. It is our intention to publish this in the *New Zealand Botanical Society Newsletter* later in 1995.

Using the Lists

As with the 1993 revision, the New Zealand Threatened Plants Committee has adopted the same system of annotating additions and changes of rank with the appropriate footnote. These should help users understand the rationale behind our decisions. We also have continued the use of a single * to indicate

indigenous taxa known to be conspecific with overseas populations and under no threat outside the New Zealand Botanical Region, e.g. *Plectranthus parviflorus*. Taxa annotated with ** are those indigenous taxa threatened both within and outside New Zealand, and/or not recently demonstrated as conspecific with overseas populations, e.g. *Lycopodium serpentinum*** in the first instance and *Sebaea ovata*** in the second.

Call for Submissions

It is intended that this list will become effective for three years from the date of publication. Submissions for the 1998 revision of the list are now sought. These should be sent to your closest threatened plant committee representative no later than 31 January 1998.

Acknowledgements

The New Zealand Threatened Plant Committee would like to thank the staff of the following Head Office Divisions of the Department of Conservation; the Protected Species Policy Division (PSPD) and Science and Research Division (S&R), for meeting the logistic and funding requirements of the committee. In particular we thank Graeme Taylor for organisation, Richard Sadler and Janet Owen for their support of the committee activities, Gillian Crowcroft for proof-reading, and Antoinette Nielsen of the Auckland Institute and Museum for typing numerous versions of the list. We are especially grateful to Brian Rance (Department of Conservation, Southland), Shannel Courtney (Department of Conservation, Nelson/Marlborough), Phil Garnock-Jones (Victoria University of Wellington), David Norton (University of Canterbury), Brian Molloy and Geoff Rogers (Manaaki-Whenua, Landcare Research) who provided a significant number of submissions and advice on undescribed taxa.

Submission acknowledgements

The committee is grateful for the submissions and information received, or supplied on request, from the following people:

R.B. Allen, A. Baird, W.R. Barker, J.W. Barkla, S. Beadel, J.E. Braggins, E.K. Cameron, P.D. Champion, R.J. Chinnock, B.D. Clarkson, S. Courtney, G.M. Crowcroft, P.J. de Lange, A.P. Druce, C.E. Ecroyd, L.J. Forester, R.O. Gardner, P.J. Garnock-Jones, D.R. Given, P.B. Heenan, S.A. Holzapfel, P.N. Johnson, C. Jones, D.G. Lloyd, G. Loh, B.P.J. Molloy, D.A. Norton, C.C. Ogle, M.J. Parsons, B.H. Patrick, B.D. Rance, G.M. Rogers, J. Sawyer, W.B. Shaw, T. Silbery, N. Simpson, P.G. Simpson, U. Swenson, W.R. Sykes, G.A. Taylor, G.Y. Walls, P. Wardle, C.J. Webb, C.J. West, P. Wilson, A.E. Wright.

BIBLIOGRAPHY

- Cameron, E.K.; de Lange, P.J.; Given, D.R.; Johnson, P.N.; Ogle, C.C. 1993: Threatened and Local Plant Lists (1993 Revision). *New Zealand Botanical Society Newsletter* 32: 14-28.
- Cheeseman, T.F. 1906: Manual of the New Zealand Flora. Government Printer, Wellington.
- Chinnock, R.J. 1992: New taxa and combinations in the Myoporaceae. *Journal of the Adelaide Botanic Gardens* 15(1): 75-79.
- Cunningham, A. 1839: Florae Insularum Novae Zelandiae precursor XVII. *Annals of Natural History* 2: 125-132.
- Druce, A.P. 1993: Indigenous higher plants of New Zealand (9th Revision). Unpublished checklist, Manaaki-Whenua, Landcare Research, Lower Hutt, New Zealand.
- Garnock-Jones, P.J. 1993: *Heliohebe* (Scrophulariaceae - Veroniceae), a new genus segregated from *Hebe*. *New Zealand Journal of Botany* 31: 323-339.
- Given, D.R. 1981: *Rare and endangered plants of New Zealand*. Reed, Wellington.
- Holzapfel, S.; Lack, H.W. 1993: New species of *Picris* (Asteraceae, Lactuceae) from Australia. *Willdenowia* 23: 181-191.
- Johnson, R.W. Convolvulaceae. In Harden, G.J. (ed.) 1992: Flora of New South Wales, Vol. 3. New South Wales University Press, Sydney.
- Jones, D.L. 1994: New species of Orchidaceae from south-eastern Australia. *Muelleria* 8(2): 177-192.
- Mace, G.; Collar, N.; Cooke, J.; Gaston, K.; Ginsberg, J.; Leader-Williams, N.; Maunders, M.; Milner-Gulland, E.J. 1993: The development of new criteria for listing species on the IUCN red list. *Species* 19: 16-22.
- Molloy, B.P.J.; Druce, A.P. 1994: A new species name in *Meliccytus* from New Zealand. *New Zealand Journal of Botany* 32: 113-118.
- Molloy, B.P.J.; St George, I.M. 1994: A new species of *Drymoanthus* (Orchidaceae) from New Zealand, and typification of *D. adversus*. *New Zealand Journal of Botany* 32: 415-421.
- Williams, P.A. 1992: Ecology of the endangered herb *Scutellaria novae-zelandiae*. *New Zealand Journal of Ecology* 16(2): 127-135.

NEW ZEALAND THREATENED PLANT LIST (1995)

Key

- * Indigenous taxon found naturally overseas and not considered threatened within the overseas part of its range. New Zealand populations have been confirmed as conspecific with overseas counterpart (33 taxa).
- ** Indigenous taxon known or thought to be threatened outside the New Zealand Botanical Region, or taxon presently treated as indigenous with additional overseas distribution but which may, on revision, prove endemic to the New Zealand Botanical Region (12 taxa).
- (!) Addition to list (51 spp.)

PRESUMED EXTINCT (9)

Taxa which are no longer known to exist in the wild or in cultivation after *repeated* searches of the type localities and other known or likely places.

<i>Chiloglottis formicifera</i> *	Orchidaceae ^{1,2}
<i>Lepidium obtusatum</i> s.str.	Brassicaceae ¹
<i>Lepidium obtusatum</i> subsp. "Manukau"	Brassicaceae ¹
<i>Logania depressa</i>	Loganiaceae ¹
<i>Muellerina celastroides</i> * (!)	Loranthaceae ¹
<i>Myosotis laingii</i>	Boraginaceae ¹
<i>Pterostylis nutans</i> *	Orchidaceae ^{1,2}
<i>Stellaria elatinooides</i>	Caryophyllaceae ¹
<i>Trilepidea adamsii</i>	Loranthaceae ¹

CRITICAL (20)

Taxa which face an *extremely high probability of extinction* in the wild within the immediate future (see Mace *et al.*, 1993, for a detailed definition).

<i>Acaena rorida</i>	Rosaceae ^{3,6}
<i>Amphibromus fluitans</i> *	Poaceae ^{3,5,6}
<i>Asplenium pauperequitum</i>	Aspleniaceae ^{2,3,6}
<i>Australopyrum calcis</i> subsp. <i>calcis</i>	Poaceae ^{3,6}
<i>Caleana minor</i> **	Orchidaceae ²
<i>Carmichaelia kirkii</i> s.lat.	Fabaceae ³
<i>Cortaderia turbaria</i>	Poaceae ³
<i>Corybas carsei</i>	Orchidaceae ^{2,3}
<i>Hebe breviflora</i>	Scrophulariaceae ³
<i>Lepidium banksii</i>	Brassicaceae ^{2,3,6}
<i>Lepidium sisymbrioides</i> subsp. <i>matau</i>	Brassicaceae ²
<i>Lepturus repens</i> * (!)	Poaceae ³
<i>Pennantia baylisiana</i>	Urticaceae ²
<i>Peperomia leptostachya</i> *	Piperaceae ⁶
<i>Pterostylis nana</i> **	Orchidaceae ⁴
<i>Ranunculus recens</i> "Moawhango"	Ranunculaceae ³
<i>Sebaea ovata</i> **	Gentianaceae ²
<i>Tecomanthe speciosa</i>	Bignoniaceae ²
<i>Thelymitra matthewsii</i> **	Orchidaceae ²
"X it"	Cunoniaceae ⁴

ENDANGERED (37)

Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating. Included are taxa whose numbers have been reduced to a critical level or whose habitats have been so drastically reduced that they are deemed to be in immediate danger of extinction.

<i>Anogramma leptophylla</i> *	Pteridaceae ^{2,3}
<i>Atriplex billardierei</i> agg. **	Chenopodiaceae
<i>Atriplex cinerea</i> *	Chenopodiaceae

Boehmeria australis var. *dealbata*
Cardamine "tarn"
Carex inopinata
Chordospartium muritai
Christella dentata "N.Z."
Clianthus puniceus
Crassula hunua
Dactylanthus taylorii
Gunnera hamiltonii
Hebe armstrongii
Hebe cupressoides
Helichrysum dimorphum
Ischnocarpus novae-zelandiae
Kunzea sinclairii
Lepidium flexicaule **
Lepidium kirkii
Lepidium oleraceum s.lat.
Leptinella nana
Metrosideros bartlettii
Muehlenbeckia astonii
Olearia hectorii
Olearia pachyphylla
Olearia polita
Pittosporum patulum (!)
Pittosporum "Surville"
Plantago spathulata subsp. *picta*
Plectranthus parviflorus *
Polystichum "Chatham's"
Pseudognaphalium "compactum"
Pterostylis micromega
Ranunculus recens "Manaia"
Rorippa divaricata
Scutellaria novae-zelandiae
Simplicia laxa

VULNERABLE (62)

Taxa believed likely to move into the Endangered category in the near future if the causal factors continue operating. Included are taxa of which most or all the populations are decreasing because of over-exploitation, extensive destruction of habitat or other environmental disturbance; taxa with populations that have been seriously depleted and whose ultimate security is not yet assured; and taxa with populations that are still abundant but are under threat from serious adverse factors throughout their range.

Aciphylla dieffenbachii
Aciphylla traversii
Alepis flavida
Astelia chathamica
Australopyrum calcis subsp. *optatum*
Baumea complanata
Botrychium aff. *lunaria* **
Calystegia marginata *
Carmichaelia curta
Carmichaelia williamsii
Celmisia macmahonii var. *macmahonii*
Chenopodium detestans
Chordospartium stevensonii
Coprosma "violacea" (!)
Coprosma waima
Coprosma wallii (!)
Crassula peduncularis *
Deschampsia caespitosa var. *macrantha*

Urticaceae
 Brassicaceae^{3,6}
 Cyperaceae
 Fabaceae
 Thelypteridaceae
 Fabaceae
 Crassulaceae^{2,3,6}
 Balanophoraceae^{2,3,6}
 Gunneraceae
 Scrophulariaceae^{2,3}
 Scrophulariaceae
 Asteraceae
 Brassicaceae^{3,6}
 Myrtaceae^{2,3,6}
 Brassicaceae^{2,3,6}
 Brassicaceae^{3,6}
 Asteraceae
 Myrtaceae
 Polygonaceae
 Asteraceae
 Asteraceae^{3,6}
 Asteraceae
 Pittosporaceae^{2,3,6}
 Pittosporaceae^{2,3,6}
 Plantaginaceae
 Lamiaceae⁵
 Dryopteridaceae^{3,6}
 Asteraceae^{2,3}
 Orchidaceae¹¹
 Ranunculaceae³
 Brassicaceae^{2,3,6}
 Lamiaceae³
 Poaceae

Apiaceae
 Apiaceae
 Loranthaceae
 Asteliaceae^{6,7,8}
 Poaceae
 Cyperaceae
 Ophioglossaceae^{2,3}
 Convolvulaceae
 Fabaceae^{3,5}
 Fabaceae^{2,3}
 Asteraceae⁶
 Chenopodiaceae^{2,3}
 Fabaceae
 Rubiaceae^{2,3}
 Rubiaceae
 Rubiaceae³
 Crassulaceae
 Poaceae

Eleocharis neozelandica
Embergeria grandifolia
Hebe acutiflora
Hebe barkerii
Hebe "bishopiana"
Hebe speciosa
Hibiscus diversifolius *
Hydatella inconspicua
Iphigenia novae-zelandiae
Isolepis basilaris
Lepidium sisymbrioides subsp. *kawarau*
Lepidium tenuicaule
Leptinella featherstonii
Luzula celata (!)
Lycopodium serpentinum **
Marattia salicina *
Mazus novaezeelandiae
Meliccytus "Egmont"
Meliccytus flexuosus
Myosotis colensoi
Myosotis laeta
Myosotis "lytteltonensis"
Myosotis "pottsiana"
Olearia fragrantissima
Olearia "Waima"
Ophioglossum petiolatum *
Pachystegia rufa
Peraxilla colensoi
Peraxilla tetrapetala
Pittosporum dallii
Pomaderris apetala *
Pomaderris polifolia *
Prasophyllum aff. patens
Ranunculus recens s.str.
Ranunculus tematifolius
Rhopalostylis "Chatham's"
Seneclo scaberulus
Sicyos australis **
Teucrium parvifolium
Todea barbara *
Triglochin palustris *
Urtica linearifolia
Wilsonia backhousei (!) *
 "Z ombi"

RARE (79)

Taxa with small populations which are not Endangered or Vulnerable *but are at risk*. These taxa are usually localized within restricted geographical areas or habitats or are thinly scattered over a more extensive range. Rare plants are often endemics with a narrow distribution whereas Vulnerable and Endangered plants have often been formerly more widespread.

Adiantum formosum *
Austrofestuca littoralis *
Brachyglottis arborescens
Brachyglottis huntii
Brachyscome linearis
Calochilus paludosus *
Carex uncifolia (!)
Celmisia adamsii var. *rugulosa*
Cheesemania "stellata" (!)
Chiloglottis valida *

Cyperaceae
 Asteraceae
 Scrophulariaceae
 Scrophulariaceae^{2,4,6}
 Scrophulariaceae
 Malvaceae
 Hydatellaceae
 Colchicaceae^{2,3}
 Cyperaceae³
 Brassicaceae
 Brassicaceae^{2,3}
 Asteraceae
 Juncaceae³
 Lycopodiaceae
 Marattiaceae³
 Scrophulariaceae
 Violaceae⁴
 Violaceae⁴
 Boraginaceae
 Boraginaceae³
 Boraginaceae
 Boraginaceae
 Asteraceae³
 Asteraceae
 Ophioglossaceae
 Asteraceae³
 Loranthaceae
 Loranthaceae
 Pittosporaceae
 Rhamnaceae
 Rhamnaceae
 Orchidaceae
 Ranunculaceae³
 Ranunculaceae^{3,6}
 Arecaceae
 Asteraceae
 Curcubitaceae³
 Verbenaceae^{2,3,6}
 Osmundaceae
 Juncaginaceae
 Urticaceae³
 Convolvulaceae⁵
 Asteraceae

Adiantaceae²
 Poaceae
 Asteraceae
 Asteraceae^{6,7,8}
 Asteraceae
 Orchidaceae
 Cyperaceae^{3,6}
 Asteraceae⁶
 Brassicaceae⁴
 Orchidaceae^{2,6,7}

Chionochoa spiralis
Chionohebe glabra
Coprosma neglecta subsp. "Maunganui Bluff"
Coprosma obconica subsp. *obconica*
Corokia macrocarpa
Crassula ruamahanga
Cyathea kermadecensis
Cyclosorus interruptus *
Davallia "Puketi"
Doodia aspera *
Euphorbia glauca
Gnaphalium nitidulum **
Grammitis rawlingsii
Gratiola nana *
Hebe adamsii
Hebe "Takahe"
Hebe "Wairoa"
Heliohebe acuta
Iti lacustris
Lepidium "Open Bay Islands"
Lepidium sisymbrioides subsp. *sisymbrioides* (!)
Leptinella albida
Leptinella pyrethrifolia var. *linearifolia*
Leptinella rotundata
Luzula crenulata
Mazus "False Islet" (!)
Meliccytus "Matiri" (!)
Myosotidium hortensia
Myosotis albosericea
Myosotis brockiei (!)
Myosotis "glauca"
Myosotis matthewsii
Myosotis oreophila
Myosurus minimus subsp. *novae-zelandiae*
Myriophyllum robustum
Myrsine "Burnett"
Neopaxia "Arthur" (!)
Notospartium torulosum
Olearia capillaris
Olearia chathamica
Olearia traversii
Olearia "Pomahaka" (!)
Ourisia modesta
Phylloglossum drummondii *
Pimelea arenaria "South"
Pimelea tomentosa s.str.
Pittosporum obcordatum
Pittosporum pimeleoides subsp. *pimeleoides*
Pittosporum turneri
Plagianthus regius var. *chathamicus*
Plantago obconica
Poa aucklandica subsp. *rakiura*
Poa senex
Poa sudicola
Pomaderris hamiltonii
Poranthera microphylla *
Pterostylis tasmanica *
Puccinellia "Central Otago"
Ranunculus godleyanus
Ranunculus haastii subsp. *piliferus*
Ranunculus viridis
Senecio dunedinensis

Poaceae^{6,7}
Scrophulariaceae⁴
Rubiaceae³
Rubiaceae
Escalloniaceae
Crassulaceae^{6,7,8}
Cyatheaceae^{6,7,8}
Thelypteridaceae
Davalliaceae^{4,6}
Blechnaceae^{6,7,8}
Euphorbiaceae^{6,7,8}
Asteraceae
Grammitidaceae
Scrophulariaceae
Scrophulariaceae
Scrophulariaceae^{2,4,6}
Scrophulariaceae^{3,4}
Scrophulariaceae
Brassicaceae
Brassicaceae^{2,4,6}
Brassicaceae^{2,3,6}
Asteraceae
Asteraceae
Asteraceae
Juncaceae
Scrophulariaceae^{4,6}
Violaceae^{3,4,6}
Boraginaceae
Boraginaceae^{6,8}
Boraginaceae^{3,6}
Boraginaceae^{3,6}
Boraginaceae
Boraginaceae^{6,8}
Ranunculaceae
Haloragaceae
Myrsinaceae³
Portulacaceae^{3,4,6}
Fabaceae
Asteraceae^{2,6}
Asteraceae
Asteraceae
Asteraceae³
Scrophulariaceae
Lycopodiaceae
Thymelaeaceae
Thymelaeaceae^{6,8}
Pittosporaceae^{6,7,8}
Pittosporaceae
Pittosporaceae
Malvaceae
Plantaginaceae
Poaceae
Poaceae
Poaceae
Rhamnaceae
Euphorbiaceae
Orchidaceae⁴
Poaceae^{4,6,8}
Ranunculaceae
Ranunculaceae³
Ranunculaceae
Asteraceae³

Senecio kermadecensis (!)
Senecio marotiri
Swainsona novae-zelandiae
Thelymitra tholliformis
Thelypteris confluens *
Tupeia antarctica
Utricularia australis *

Asteraceae³
Asteraceae
Fabaceae⁶
Orchidaceae
Thelypteridaceae
Loranthaceae
Lentibulariaceae

INSUFFICIENTLY KNOWN (28)

Taxa that are suspected but not definitely known to belong to any of the above categories because of lack of information. An "Insufficiently Known" taxon does not have to be proved to be in any of the four categories - Critical, Endangered, Vulnerable or Rare. It is hoped that listing a taxon as "Insufficiently Known" will stimulate studies to find out its true category of threat.

Aciphylla leighii
Calochilus herbaceus *
Carex chathamica
Carex "tenuiculmis" (!)
Carex ventosa
Chionohebe myosotoides
Coriaria pottslana
Crassula colorata var. *acuminata* *
Deschampsia pusilla
Hebe imbricata
Juncus holoschoenus
Korthalsella salicornioides (!)
Leptinella filiformis
Libertia peregrinans agg.
Limosella curdieana *
Myosotis cheesemanii
Myosotis glabrescens
Myosotis petiolata s.str.
Oreomyrrhis "delicatula" (!)
Peperomia "purple vein"
Picris angustifolia subsp. *merxmulleri* (!) *
Picris attenuata (!)
Polygonum plebeium (!) *
Rytidosperma tenue
Thelymitra "Ahipara"
Trisetum "serpentine" (!)
Uncinia purpurata
Uncinia strictissima (!)

Apiaceae
Orchidaceae
Cyperaceae
Cyperaceae³
Cyperaceae
Scrophulariaceae
Coriariaceae
Crassulaceae⁵
Poaceae
Scrophulariaceae
Juncaceae⁸
Viscaceae³
Asteraceae
Iridaceae
Scrophulariaceae
Boraginaceae
Boraginaceae
Boraginaceae
Apiaceae
Piperaceae
Asteraceae
Asteraceae
Polygonaceae⁵
Poaceae
Orchidaceae
Poaceae
Cyperaceae
Cyperaceae

TAXONOMICALLY INDETERMINATE (84)

This includes: (1) Taxa about which there is doubt regarding taxonomic status and which require further investigation; and (2) genetic variants which are distinct at a level which may not warrant formal taxonomic recognition. Entries are grouped by probable category of threat.

Presumed Extinct (4)

Carmichaelia floribunda (!)
Deyeuxia "Flaxbourne"
Myosotis traversii var. *cinerascens*
Pseudognaphalium "Zoo" (!)

Fabaceae¹
Poaceae^{1,5}
Boraginaceae¹
Asteraceae¹

Extinct in wild (2)

Carmichaelia prona
Hebe pimeleoides var. *glauco-caerula* (!)

Fabaceae
Scrophulariaceae

Critical (5)

Carmichaelia arenaria
Carmichaelia fieldii
Celmisia "Mangaweka"
Cheesemania "Chalk Range"
Pimelea "Turakina"

Fabaceae^{3,4}
Fabaceae^{3,4}
Asteraceae
Brassicaceae^{3,4}
Thymelaeaceae³

Endangered (15)

Brachyscome "Pareora"
Colobanthus "Pareora"
Craspedia "Chatham"
Craspedia "Kaitorete"
Craspedia "tarn" (!)
Gentiana "Pareora"
Gentiana "Waitaki"
Geranium "Pareora"
Geranium "Tengawai"
Leptinella "Clutha"
Leptinella intermedia
Leptinella "Pareora"
Leptinella "Tengawai"
Limosella "Opunake"
Linum monogynum var. *chathamicum*

Asteraceae
Caryophyllaceae
Asteraceae³
Asteraceae
Asteraceae
Gentianaceae
Gentianaceae³
Geraniaceae
Geraniaceae
Asteraceae
Asteraceae
Asteraceae
Asteraceae
Scrophulariaceae
Linaceae

Vulnerable (13)

Brachyscome "Ward"
Gentiana "Brown"
Gentiana "scree" (!)
Gentiana "Ward"
"Gingidia patula"
Hebe "Awaroa"
Hebe "Bald Knob Ridge"
*Hibiscus trionum "NZ" ***
Hypsela "Burgoo" (!)
Leptinella dioica subsp. *monoica*
Myosotis "Flora" (!)
Myosotis "Volcanic Plateau"
Ranunculus "Waihao"

Asteraceae
Gentianaceae
Gentianaceae
Gentianaceae
Apiaceae
Scrophulariaceae
Scrophulariaceae
Malvaceae
Lobeliaceae⁶
Asteraceae⁶
Boraginaceae
Boraginaceae
Ranunculaceae

Rare (17)

Brachyglottis saxifragoides
Carex kirkii var. *elator*
Carmichaelia hollowayii
Carmichaelia nigrans
Deyeuxia "Waima"
Euphrasia "White" (!)
Geranium "Red Hills"
Hebe dilatata (!)
Hydrocotyle "Ototoa"
Limosella "Manutahi"
Meliccytus "Burnett"
Ourisia "Clark" (!)
Ourisia "Richmond" (!)
Parahebe "hairy" (!)
Pratia "Woodhill"
Ranunculus "Hope" (!)
Wahlenbergia simpsonii

Asteraceae
Cyperaceae
Fabaceae
Fabaceae
Poaceae
Scrophulariaceae
Geraniaceae⁶
Scrophulariaceae
Apiaceae⁶
Scrophulariaceae
Violaceae
Scrophulariaceae
Scrophulariaceae
Scrophulariaceae
Lobeliaceae
Ranunculaceae
Campanulaceae

Insufficiently Known (28)

<i>Brachyglottis southlandica</i> var. <i>albidula</i>	Asteraceae
<i>Brachyscome</i> "West Dome" (!)	Asteraceae
<i>Cardamine</i> "Rata Peak"	Brassicaceae
<i>Cardamine</i> "Reporoa Bog slender var."	Brassicaceae
<i>Carex allanii</i>	Cyperaceae
<i>Carmichaelia juncea</i> (!)	Fabaceae
<i>Celmisia cordatifolia</i> var. <i>similis</i> (!)	Asteraceae
<i>Chenopodium pusillum</i>	Chenopodiaceae
<i>Craspedia</i> "Fyfe" (!)	Asteraceae
<i>Craspedia</i> "Gouland Downs" (!)	Asteraceae
<i>Craspedia</i> "Hackett" (!)	Asteraceae
<i>Craspedia</i> "Henderson" (!)	Asteraceae
<i>Craspedia</i> "Loveridge" (!)	Asteraceae
<i>Craspedia</i> "Pikikiruna" (!)	Asteraceae
<i>Dracophyllum</i> "glaucaus" (!)	Epacridaceae
<i>Dracophyllum viride</i>	Epacridaceae
<i>Euphrasia</i> "Zetland" (!)	Scrophulariaceae ³
<i>Hebe annulata</i>	Scrophulariaceae
<i>Hebe mathewsii</i>	Scrophulariaceae
<i>Muehlenbeckia debilis</i>	Polygonaceae
<i>Myosotis</i> "Mossburn" (!)	Boraginaceae
<i>Myosotis</i> "Tapuaenuku" (!)	Boraginaceae
<i>Pimelea aridula</i> agg.	Thymelaeaceae
<i>Pimelea</i> "Three Kings" agg.	Thymelaeaceae
<i>Pterostylis</i> aff. <i>graminea</i> (!)	Orchidaceae
<i>Pygmaea armstrongii</i>	Scrophulariaceae
<i>Spiranthes</i> "Motutangi"	Orchidaceae
<i>Utricularia</i> "Chatham" (!)	Lentibulariaceae

Explanation of Footnotes

- ¹Repeated systematic surveys have failed to locate taxon in the wild. Taxon is not known in cultivation from New Zealand sources.
- ²Species constrained by either reproductive behaviour or ecological requirements.
- ³Apparently less common or more threatened than previously believed.
- ⁴Systematic name change either recently published or revision in process.
- ⁵Possibly adventive.
- ⁶Ecology and distribution better understood.
- ⁷Previous threat(s) lessened by management.
- ⁸More abundant on known sites than previously believed.

NEW ZEALAND BOTANICAL SOCIETY LOCAL PLANT LIST (1995)

Key

- * Taxon found naturally overseas and not considered uncommon within that range. New Zealand taxon has been demonstrated as conspecific with overseas counterpart (11 taxa).
- ** Indigenous taxon known or thought to be uncommon outside the New Zealand Botanical Region, or taxon presently treated as indigenous but which may, on revision, prove endemic to the New Zealand Botanical Region (2 taxa).
- (!) Addition to list (30 spp.)

LOCAL PLANT LIST (142)

This is not an IUCN Threat Category. This is designed to act as a 'watchlist' for taxa which are sufficiently restricted to warrant noting and some monitoring. It may include taxa which occupy habitats potentially threatened in the future, and those found in sensitive habitats which are prone to damage.

<i>Gentiana antipoda</i>	Gentianaceae ⁵
<i>Gentiana gibbsii</i>	Gentianaceae
<i>Gentiana lilliputiana</i>	Gentianaceae
<i>Geranium traversii</i>	Geraniaceae
<i>Geum divergens</i>	Rosaceae
<i>Geum pusillum</i>	Rosaceae ^{1,3}
<i>Gunnera densiflora</i> (!)	Gunneraceae ⁷
<i>Haloragis erecta</i> subsp. <i>cartilaginea</i>	Haloragaceae
<i>Hebe "Bartlett"</i>	Scrophulariaceae
<i>Hebe "brevifolia"</i>	Scrophulariaceae
<i>Hebe dieffenbachii</i>	Scrophulariaceae ^{2,3}
<i>Hebe elliptica</i> var. <i>crassifolia</i>	Scrophulariaceae
<i>Hebe gibbsii</i>	Scrophulariaceae
<i>Hebe ligustrifolia</i> var. "Surville"	Scrophulariaceae
<i>Hebe "marble"</i> (!)	Scrophulariaceae ^{4,7}
<i>Hebe "Mokohinau"</i>	Scrophulariaceae ⁵
<i>Hebe murrellii</i>	Scrophulariaceae
<i>Hebe pareora</i>	Scrophulariaceae
<i>Hebe ramosissima</i>	Scrophulariaceae
<i>Helichrysum aggregatum</i> var. "Surville"	Asteraceae
<i>Helichrysum intermedium</i> var. "tumidum"	Asteraceae
<i>Helichrysum plumeum</i>	Asteraceae
<i>Heliohebe raoulii</i> var. <i>maccaskillii</i>	Scrophulariaceae ⁴
<i>Hypolepis amaurorachis</i> *	Dennstaedtiaceae
<i>Ileostylus micranthus</i> **	Loranthaceae
<i>Kirkianella "Cook Strait"</i> (!)	Asteraceae ⁷
<i>Leptinella calcarea</i>	Asteraceae
<i>Leucogenes "Peel"</i>	Asteraceae ⁴
<i>Leucopogon parviflorus</i> s.lat. **	Epacridaceae
<i>Macropiper melchior</i>	Piperaceae ⁵
<i>Meryta sinclairii</i>	Araliaceae ⁵
<i>Muehlenbeckia ephedroides</i> (!)	Polygonaceae ¹
<i>Myosotis angustata</i> (!)	Boraginaceae ⁷
<i>Myosotis arnoldii</i>	Boraginaceae
<i>Myosotis concinna</i> (!)	Boraginaceae ^{1,3}
<i>Myosotis monroi</i> (!)	Boraginaceae ⁷
<i>Myosotis "pansa"</i>	Boraginaceae
<i>Myrsine coxii</i>	Myrsinaceae
<i>Myrsine oliverii</i>	Myrsinaceae ⁵
<i>Notothlaspi "Red Hills"</i>	Brassicaceae ²
<i>Notospartium carmichaeliae</i>	Fabaceae
<i>Olearia allomii</i>	Asteraceae ⁵
<i>Oreomyrrhis "minutiflora"</i> (!)	Apiaceae ⁷
<i>Ourisia goulardiana</i>	Scrophulariaceae
<i>Ourisia spathulata</i>	Scrophulariaceae
<i>Parsonsia "Surville"</i>	Apocynaceae
<i>Peperomia tetraphylla</i> * (!)	Piperaceae ⁷
<i>Phyllocladus "serpentine"</i>	Podocarpaceae
<i>Picris burbridgei</i> * (!)	Asteraceae ⁴
<i>Pimelea arenaria "North"</i> (!)	Thymelaeaceae ^{1,3}
<i>Pittosporum fairchildii</i>	Pittosporaceae ⁵
<i>Pittosporum pimeleoides</i> subsp. <i>major</i>	Pittosporaceae
<i>Pittosporum virgatum</i>	Pittosporaceae
<i>Pleurosorus rutifolius</i> *	Aspleniaceae
<i>Poa pygmaea</i>	Poaceae
<i>Pomaderris paniculosa</i> subsp. <i>novae-zelandiae</i>	Rhamnaceae
<i>Pseudopanax ferox</i>	Araliaceae
<i>Pterostylis "linearis"</i>	Orchidaceae
<i>Puccinellia antipoda</i> (!)	Poaceae ⁵
<i>Ranunculus brevis</i>	Ranunculaceae
<i>Ranunculus grahamii</i>	Ranunculaceae
<i>Ranunculus maculatus</i>	Ranunculaceae

Ranunculus recens var. *lacustris*
Ranunculus scirithalis
Ranunculus stylosus
Raoulia cinerea
Rytidosperma petrosorum
Senecio "Cuvier"
Senecio hawaii
Senecio lautus var. *esperensis* (!)
Senecio "Pokohinu" (!)
Simplicia buchananii
Stellaria decipiens var. *angustata* (!)
Stilbocarpa lyallii
Stilbocarpa robusta
Stipa petriei
Streblus banksii (!)
Tetrachondra hamiltonii
Thelymitra malvina
Thismia rodwayi *

Ranunculaceae
 Ranunculaceae
 Ranunculaceae
 Asteraceae
 Poaceae^{1,2}
 Asteraceae^{1,2,3,4,5}
 Asteraceae
 Asteraceae⁵
 Asteraceae^{1,2,3,4,5}
 Poaceae
 Caryophyllaceae⁵
 Araliaceae⁹
 Araliaceae⁹
 Poaceae^{6,8}
 Moraceae⁷
 Tetrachondraceae
 Orchidaceae^{1,3}
 Thismiaceae

Explanation of Footnotes

- ¹Ecology and distribution better understood.
- ²Previous threat(s) lessened by management.
- ³More abundant on known sites than previously believed.
- ⁴Systematic name change either recently published or revision in process.
- ⁵Island endemic under no immediate threat or less threatened than previously believed.
- ⁶Possibly adventive.
- ⁷Apparently less common or more threatened than previously believed.

SPECIES NO LONGER CONSIDERED THREATENED OR LOCAL (50 taxa)

Taxa formerly considered under some level of threat in Cameron *et al.* (1993) but which are here rejected from this revision of the New Zealand Botanical Society Threatened Plant and Local Plant Lists, because they are more widespread or abundant than previously thought.

Formerly Ranked as Presumed Extinct (1)

Eremophila debilis * Myoporaceae^{5,7}

Formerly Ranked as Endangered (1)

Wahlenbergia stricta subsp. *stricta* * Campanulaceae^{1,7}

Formerly Ranked as Rare (2)

Alectryon excelsus var. *grandis* Sapindaceae^{1,2,3}
Ranunculus macropus Ranunculaceae^{1,2,3}

Formerly Ranked as Insufficiently Known or Taxonomically Indeterminate (11)

Colobanthus "Tengawai" Caryophyllaceae^{3,4}
Coprosma neglecta "Three Kings" Rubiaceae⁸
Dracophyllum "Puketi" Epacridaceae⁴
Gentiana "Charleston" Gentianaceae⁴
Lagenifera stipitata * Asteraceae^{1,3}
Microlaena thomsonii Poaceae^{1,3}
Notospartium glabrescens Fabaceae^{1,3}
Olearia angulata Asteraceae^{2,3}
Phormium "Chatham" Phormiaceae^{1,2,3,8}
Phormium "Surville" Phormiaceae⁴
Wahlenbergia brockiei Campanulaceae^{1,3,4}

Formerly Ranked as Local (35)

Carex elingamita
Chionochoa lanca
Christella "thermal"
Coprosma acutifolia
Corybas cryptanthus
Corybas rotundifolius
Coprosma propinqua var. *martinii*
Davallia tasmanii
Desmoschoenus spiralis
Hebe "angustissima"
Hebe biggarii
Hebe insularis
Hebe townsonii
Homalanthus polyandrus
Ipomoea pes-caprae subsp. *brasiliensis* *
Leptinella dispersa subsp. *rupestris*
Macrothelypteris torresiana *
Mitrasacme montana var. *helmsii*
Myrsine "Poor Knights"
Myosotis saxosa
Nephrolepis cf. cordifolia **
Olearia coriacea
Pimelea crosby-smithiana
Pimelea suteri
Pisonia brunoniana *
Pseudopanax gilliesii
Pseudopanax kermadecensis
Schizaelema cockaynei
Solanum aviculare var. *latifolia*
Sprengelia incarnata *
Stellaria "Poor Knights"
Thelymitra "rough leaf"
Utricularia delicatula
Xeronema callistemon
Yuania australis

Cyperaceae⁸
 Poaceae^{1,3}
 Thelypteridaceae^{1,3}
 Rubiaceae^{2,8}
 Orchidaceae^{1,3}
 Orchidaceae^{1,3}
 Rubiaceae^{1,2,3,8}
 Davalliaceae⁸
 Cyperaceae^{1,2,3}
 Scrophulariaceae^{1,3}
 Scrophulariaceae^{1,3}
 Scrophulariaceae^{1,8}
 Scrophulariaceae^{1,3}
 Euphorbiaceae^{2,8}
 Convolvulaceae^{1,3}
 Asteraceae^{1,3}
 Thelypteridaceae^{1,3}
 Spigeliaceae^{1,3}
 Myrsinaceae⁸
 Boraginaceae^{1,3}
 Davalliaceae^{1,3}
 Asteraceae^{1,3}
 Thymelaeaceae^{1,3}
 Thymelaeaceae^{1,3}
 Nyctaginaceae^{1,3}
 Araliaceae^{1,3}
 Araliaceae^{1,2,3,8}
 Apiaceae^{1,3}
 Solanaceae^{1,2,4}
 Epacridaceae^{1,3}
 Caryophyllaceae^{1,2,3}
 Orchidaceae^{1,3}
 Lentibulariaceae^{1,2,3}
 ?Phormiaceae^{3,8}
 Orchidaceae^{1,3}

Explanation of Footnotes

- ¹Ecology and distribution better understood.
- ²Previous threat(s) lessened by management.
- ³More abundant on known sites than previously believed.
- ⁴Taxonomically indistinct.
- ⁵Systematic name change either recently published or revision in process.
- ⁶Taxonomic status uncertain.
- ⁷Adventive.
- ⁸Island endemic under no immediate threat or less threatened than previously believed.

Acknowledgement: Thanks to Antoinette Nielsen and Ewen Cameron who produced camera-ready copy for the printer.