Checklist of *Metrosideros* cultivars

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Introduction

Metrosideros (Myrtaceae family) is a genus of about 53 species of aromatic trees, shrubs and lianes that are native to islands of the Pacific, including endemic species found in New Caledonia (20-21 spp.), New Zealand (12 spp., including 1 sp. on Kermadec Is), New Guinea (5 spp.), Hawai'i (5 spp.), Lord Howe Island (2 spp.), the Solomon Islands (1–2 spp.), the Bonin Islands (1 sp.), Fiji (1 sp.), Samoa (1 sp.) and the Philippines (1 sp.) (Wikipedia, 2010). One species, M. collina A.Gray, is not endemic to a particular island group but instead ranges from Vanuatu to French Polynesia. The remaining species of *Metrosideros* is an outlier, M. angustifolia Dum. Cours. of South Africa.

All 12 native species are cultivated in New Zealand to varying degrees M. albiflora Sol. ex Gaertn., M. bartlettii J.W.Dawson, M. carminea W.R.B.Oliv., M. colensoi Hook.f., M. diffusa (G.Forst.) Sm., M. excelsa Sol. ex Gaertn., M. fulgens Sol. ex Gaertn., M. kermadecensis W.R.B.Oliv., M. parkinsonii Buchanan, M. perforata (J.R.Forst. & G.Forst.) A.Rich., M. robusta A.Cunn. and M. umbellata Cav. (e.g., Allan, 1961; Dawson, 1985; Dawson et al., 2010a, 2010b; Gaddum, 1997, 1999a, 1999b, 2001; Metcalf, 1987, 2000; Simpson, 2005). The Pacific Island M. collina (sold under various names) and to a limited extent the Lord Howe M. nervulosa are also cultivated in warmer regions of New Zealand. M. polymorpha Gaudich. is seldom cultivated and not generally available from New Zealand nurseries. M. queenslandica L.S.Sm. was listed as cultivated in New Zealand (Gaddum, 1997, 1999a, 1999b, 2001, as M. queenslandicus) but in 1993 was transferred to a new genus, as Thaleropia queenslandica (L.S.Sm.) Peter G.Wilson (Wilson, 1993). Consequently, there are no true Metrosideros native to mainland

Australia, although two species (M. nervulosa and M. sclerocarpa J.W.Dawson) are endemic to Lord Howe Island.

Outside of New Zealand, species and cultivars of Metrosideros are grown in Australia, Hawai'i, Spain, milder regions of England, Ireland and the USA, and elsewhere.

Metrosideros are cultivated for their showy flowers, as street trees, amenity plants and are grown in home gardens. Their flowers are usually red, but some species and cultivars have orange, yellow or white flowers. Most cultivars are derived from New Zealand species, particularly from M. excelsa (pōhutukawa, with 42 cultivars accepted here), followed by M. umbellata (southern rātā, with 16 cultivars) and other species documented most fully by Dawson et al. (2010a, 2010b). All eight interspecific hybrids that have been selected and named as cultivars are from New Zealand species in subgenus Metrosideros.

Nearly 100 Metrosideros cultivars are accepted in this checklist and more than 40% are selections of M. excelsa, chosen for their flower colour, flowering time, density and growth habit or variegation. Metrosideros excelsa and Leptospermum scoparium (Dawson and Metcalf, 2011), both of the Myrtaceae, are native species with large numbers of cultivars, indicative of their wide intraspecific variation and the esteem they are held in by horticulturists.

The naming of the majority of Metrosideros cultivars derived from New Zealand species has happened relatively recently. Few cultivars were available prior to 1960 (M. diffusa 'Variegata', 1906/07; M. excelsa 'Aurea', 1947; M. fulgens 'Aurata', 1891; M. fulgens 'Magnifica', 1929; M. fulgens 'Variegata', 1928; M. kermadecensis 'Variegata',

c. 1940-1942), and these were selected for deviant flower colour (for M. excelsa 'Aurea' and M. fulgens 'Aurata') or having leaf variegation (for the others). In contrast, during the intervening decades, there are now about 100 legitimately named cultivars. Most are still grown or are available in the nursery trade.

Compared to cultivars listed in checklists for Cordyline (Heenan, 1991a), Hebe (Metcalf, 2001), Leptospermum (Metcalf, 1963; Dawson and Metcalf, 2011), Phormium (Heenan, 1991b) and Sophora (Heenan, 1992), there are fewer examples of confusion in cultivar naming in Metrosideros. The greatest uncertainties have surrounded cultivars that should correctly be placed in Metrosideros collina and in assigning cultivars to either M. excelsa or M. kermadecensis. The majority of Metrosideros cultivars are of recent origin (as explained above) and relatively well documented as articles have regularly been published (typically from the 1980s up to about 2000 in Commercial Horticulture and the New Zealand Gardener). These articles provide brief descriptions and details of history, selection and naming (e.g., Redgrove, 1983; Edwards, 1987a, 1987b, 1989, 1990a, 1990b, 1990c, 1991, 2000; Metcalf, 1987, 2000; Hutchinson, 1988; Hobbs, 1992; ARC, 1999). After a ten-year gap in relevant publications, the most comprehensive and recent accounts upon which this checklist is predominantly based is Dawson et al. (2010a, 2010b).

The most numerous introductions have been made by Duncan & Davies Nurseries with about 14 selections, mostly from cultivated material, and by Auckland plantsman Graeme Platt with about 20 selections, from wild plants and mature plants already in cultivation. It is significant that these selection programmes (especially

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that of Platt's) have specific criteria and objectives which have resulted in plants of excellent garden quality. Too often cultivars are selected and named for any deviance or variation, however insignificant, rather than any specific aesthetic or cultural quality.

For brevity this published checklist lacks a bibliography for each cultivar name (references to articles and nursery catalogues in which they were published); the full and formal Metrosideros register will become available on the RNZIH website at www.rnzih.org.nz/pages/cultivars. html. This online cultivar register² will be updated as new information and cultivars come to hand. We would therefore gratefully receive comments on this checklist and additional information to that presented here.

Cultivar nomenclature issues such as priority, synonymy and orthography are considered in accordance with the International Code of Nomenclature for Cultivated Plants (ICNCP; Brickell et al., 2009). Orthographic errors of the cultivar names are included in the lists below. Not included here are orthographic errors of species names, including the most commonly encountered misspelling "M. excelsus" for M. excelsa. Names in bold in the following lists denote cultivars accepted here with their full species or hybrid names; those not in bold represent synonyms, cultivars of uncertain status, or those that do not meet the rules of the ICNCP.

Alphabetical list of Metrosideros cultivars derived from New Zealand species

- M. aurata = M. fulgens 'Aurata'
- M. 'Aurea' = M. excelsa 'Aurea'
- M. 'Butterscotch' = M. excelsa 'Butterscotch'
- M. carminea 'Adult' refer to M. carminea 'Ferris Wheel' and M. carminea 'Red Carpet'
- M. carminea adult foliage refer to M. carminea 'Ferris Wheel' and M. carminea 'Red Carpet'
- M. carminea 'Carousel'
- M. carminea 'Ferris Wheel'
- M. carminea 'Ferrous Wheel' = M. carminea 'Ferris Wheel'
- M. carminea 'Red Carpet'

- M. 'Carousel' = M. carminea 'Carousel'
- M. 'Centennial' = M. excelsa 'Centennial'
- M. 'Cleveland Red' (M. umbellata (♀) × M. excelsa (♂))
- M. diffusa 'Crystal' = M. diffusa 'Crystal Showers'
- M. diffusa 'Crystal Showers'
- M. diffusa 'Variegata'
- M. excelsa 'Aurea'
- M. excelsa 'Aureus' = M. excelsa 'Aurea'
- M. excelsa 'Beoley Gold'
- M. excelsa 'Blockhouse Bay'
- M. excelsa 'Butterscotch'
- M. excelsa 'Centennial'
- M. excelsa 'Christmas Cheer'
- M. excelsa 'Dalese'
- M. excelsa 'Exotica'
- M. excelsa 'Fire Mountain'
- M. excelsa 'Firestone'
- M. excelsa 'Flame Crest'
- M. excelsa 'Frosty Morn' = M. excelsa 'Upper Hutt'
- M. excelsa 'Goldfinger' = M. excelsa 'Gold Finger'
- M. excelsa 'Gold Finger'
- M. excelsa 'Gold Nugget'
- M. excelsa 'Hauraki'
- M. excelsa 'Jester'
- M. excelsa 'Kopere'
- M. excelsa 'Lemon Twist'
- M. excelsa 'Lighthouse'
- M. excelsa 'Manukau'
- M. excelsa 'Maori Princess'
- M. excelsa 'Midas'
- M. excelsa 'Mini Christmas'
- M. excelsa 'Moon Maiden'
- M. excelsa 'Mt Maunganui'
- M. excelsa 'Octopussy'
- M. excelsa 'Ohope'
- M. excelsa 'Parnell'
- M. excelsa 'Pink Lady'
- M. excelsa 'Plus Four'
- M. excelsa 'Pouawa'
- M. excelsa 'Rangitoto'
- M. excelsa 'Rata Maid' = M. excelsa 'Fire Mountain'
- M. excelsa 'Royal Flame'
- M. excelsa 'Scarlet Pimpernel'
- M. excelsa 'Spring Fire' = M. collina 'Spring Fire'
- M. excelsa 'Springtime'
- M. excelsa 'Sunglow'
- M. excelsa 'Tamaki'
- M. excelsa 'Te Kaha'

- M. excelsa 'Titirangi'
- M. excelsa 'Upper Hutt'
- M. excelsa 'Variegata' = (in part) M. kermadecensis 'Variegata'
- M. excelsa 'Variegatus' = M. excelsa 'Variegata'
- M. excelsa 'Vibrance'
- M. excelsa 'Vibrance Variegata' = M. excelsa 'Upper Hutt'
- M. excelsa 'Waiomu Bav' = M. excelsa 'Vibrance'
- M. excelsa 'Whakarewarewa'
- M. excelsa 'White Caps'
- M. 'Exotica' = M. excelsa 'Exotica'
- M. 'Ferris Wheel' = M. carminea 'Ferris Wheel'
- M. 'Firestone' = M. excelsa 'Firestone'
- M. florida var. variegata = M. fulgens 'Variegata'
- M. 'Frosty Morn' = M. excelsa 'Upper Hutt'
- M. fulgens 'Aurata'
- M. fulgens 'Gold'
- M. fulgens 'Jaffa'
- M. fulgens 'Magnifica'
- M. fulgens 'Orange Princess'
- M. fulgens 'Red Glow'
- M. fulgens 'Variegata'
- M. 'Gold Band' = M. kermadecensis 'Gold Band'
- M. 'Gold Finger' = M. excelsa 'Gold Finger'
- M. 'Gold Nugget' = M. excelsa 'Gold Nugget' and M. umbellata 'Gold Nugget'
- M. hypericifolia 'Variegata' = M. diffusa 'Variegata'
- M. kermadecensis 'Cream Ridge'
- M. kermadecensis 'Frosty' possibly = M. excelsa 'Upper Hutt'
- M. kermadecensis 'Gala'
- M. kermadecensis 'Gold Band'
- M. kermadecensis 'Jester' = M. excelsa 'Jester'
- M. kermadecensis 'Lewis Nicholls'
- M. kermadecensis 'Platt's Form'
- M. kermadecensis 'Radiant'
- M. kermadecensis 'Red and Gold'
- M. kermadecensis 'Sunninghill'
- M. kermadecensis 'Variegata' = (in part) M. excelsa 'Variegata'
- M. kermadecensis 'Variegatus' = M. kermadecensis 'Variegata'
- M. 'Krinkley' = M. robusta 'Krinkley'
- M. 'Lewis Nicholls' =

M. kermadecensis 'Lewis Nicholls'

² The Brooklyn Botanic Garden is the de facto International Cultivar Registration Authority (ICRA) for Metrosideros and many other woody plant genera that have not been assigned to other ICRAs. Their website (www.bbg.org/research/taxonomy/#/tabs-2) currently lacks any entries for Metrosideros.

- M. 'Magnifica' = M. fulgens 'Magnifica'
- M. 'Maori Princess' = M. excelsa 'Maori Princess'
- M. 'Maungapiko' (M. excelsa x M. umbellata)
- M. 'Midas' = M. excelsa 'Midas'
- M. 'Mini Christmas' = M. excelsa 'Mini Christmas'
- M. 'Mini Xmas' = M. excelsa 'Mini Christmas'
- M. 'Mistral' = M. ×sub-tomentosa 'Mistral' (M. excelsa x M. robusta)
- M. 'Mt Maungapiko' = M. 'Maungapiko' (M. excelsa x M. umbellata)
- M. 'Parnell' = M. excelsa 'Parnell'
- M. perforata 'Wee Willie Winkie'
- M. 'Radiant' = M. kermadecensis 'Radiant'
- M. 'Rangitoto' = M. excelsa 'Rangitoto'
- M. 'Red and Gold' = M. kermadecensis 'Red and Gold'
- M. 'Red Haze' (M. excelsa x M. kermadecensis)
- M. reflexa 'Crystal' = M, diffusa 'Crystal Showers'
- M. robusta 'Aurea' = M. excelsa 'Aurea'
- M. robusta 'Kawa Copper'
- M. robusta 'Krinkley'
- M. robusta 'Tane's Gold' = M. robusta 'Krinkley'
- M. 'Rustic Beauty' (M. excelsa x M. umbellata)
- M. scandens var. magnifica = M. fulgens 'Magnifica'
- M. 'Scarlet Pimpernel' = M. excelsa 'Scarlet Pimpernel'
- M. 'Sentinel Flame' (M. robusta × M. umbellata)
- M. 'Sparrow's Hybrid' = M. umbellata 'Sparrow's Hybrid'
- M. ×sub-tomentosa 'Hauparapara' $(M. excelsa \times M. robusta)$
- M. xsub-tomentosa 'Mistral' $(M. excelsa \times M. robusta)$
- M. xsub-tomentosa 'Rangi' $(M. excelsa \times M. robusta)$
- M. 'Sunglow' = M. excelsa 'Sunglow'
- M. 'Sunninghill' = M. kermadecensis 'Sunninghill'
- M. 'Tane's Gold' = M. robusta 'Krinkley'
- *M. tomentosa* 'Aurea' = *M. excelsa* 'Aurea'
- M. tomentosa 'Dalese' = M. excelsa 'Dalese'
- M. tomentosa var. variegata = M. kermadecensis 'Variegata'

- M. 'Twistie' = M. robusta 'Krinkley'
- M. umbellata 'Alba'
- M. umbellata 'Christmas Dream'
- M. umbellata 'Denniston Yellow'
- M. umbellata 'Fireball'
- M. umbellata 'Firecracker'
- M. umbellata 'Gold Beacon'
- M. umbellata 'Gold Nugget'
- M. umbellata 'Harlequin'
- M. umbellata 'Kaka'
- M. umbellata 'Lowmoo' = M. umbellata 'Moonlight'
- M. umbellata 'Lownug' = M. umbellata 'Gold Nugget'
- M. umbellata 'Moonlight'
- M. umbellata 'Mt Augusta' = M. umbellata 'Mt Augustus'
- M. umbellata 'Mt Augustus'
- M. umbellata orange form
- M. umbellata pink form = M. umbellata 'Kaka'
- M. umbellata red tipped form
- M. umbellata 'Red Tips'
- M. umbellata 'Scarlet Beacon'
- M. umbellata 'Silver Beacon'
- M. umbellata 'Silver Tips' = M. umbellata 'Silver Beacon'
- M. umbellata 'Sparrow's Hybrid'
- M. umbellata 'St Nicholas'
- M. umbellata white form = M. umbellata 'Alba'
- *M. umbellata* yellow form = (in part) M. umbellata 'Denniston Yellow'
- M. 'Upper Hutt' = M. excelsa 'Upper Hutt'
- M. 'Variegata' = M. excelsa 'Variegata' and M. kermadecensis 'Variegata' (and possibly M. diffusa 'Variegata' and M. fulgens 'Variegata')
- M. 'Vibrance' = M. excelsa 'Vibrance'

Alphabetical list of Metrosideros cultivars from non-New Zealand species

- M. collina 'Crimson Glory'
- M. collina 'Explosion'
- M. collina 'Fiji'
- M. collina 'Little Dugald'
- M. collina 'Red Baby'
- M. collina 'Spring Fire'
- M. collina 'Tahiti'
- M. collina 'Tahitian Sunset'
- M. collina 'Thomasii' = M. collina 'Spring Fire'
- M. collina var. 'Vitiensis' = M. collina 'Fiji'
- M. collina var. vitiensis 'Fiji' = M. collina 'Fiji'

- M. 'Crimson Glory' = M. collina 'Crimson Glory'
- M. 'Explosion' = M. collina 'Explosion'
- M. 'Fiji' = M. collina 'Fiji'
- M. 'Fiji Fire' = M. collina 'Fiji'
- M. 'Little Dugald' = M. collina 'Little Dugald'
- M. "Lord Howe" = M. nervulosa 'Lord Howe'
- M. nervulosa 'Lord Howe'
- M. polymorpha 'Tahiti' = M. collina 'Tahiti'
- M. 'Red Baby' = M. collina 'Red Baby'
- M. rugosa 'Lord Howe Is' = M. nervulosa 'Lord Howe'
- M. 'Spring Fire' = M. collina 'Spring Fire'
- M. 'Springfire' = M. collina 'Spring Fire'
- M. villosa 'Spring Fire' = M. collina 'Spring Fire'
- M. vitiencensis 'Fiji' = M. collina 'Fiji'
- M. 'Tahiti' = M. collina 'Tahiti'
- M. 'Tahitian Sunset' = M. collina 'Tahitian Sunset'
- M. 'Thomasii' = M. collina 'Spring Fire'
- M. villosa 'Spring Fire' = M. collina 'Spring Fire'
- M. villosa 'Tahiti' = M. collina 'Tahiti'
- M. villosus 'Tahiti' = M. collina 'Tahiti'

Rejected cultivar

M. kermadecensis 'Goldsplash'

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References

Allan, H.H. (1961). Flora of New Zealand, Vol. I. Government Printer, Wellington.

Auckland Botanic Gardens (ARC) (1999). Pōhutukawas and related species for Auckland gardens. Advisory Leaflet No. N16. December 1998, revised January 1999.

- Brickell, C.D. et al. (eds.) (2009). International Code of Nomenclature for Cultivated Plants (ICNCP or Cultivated Plant Code) incorporating the rules and recommendations for naming plants in cultivation. 8th ed., adopted by the International Union of Biological Sciences, International Commission for the Nomenclature of Cultivated Plants. Scripta Horticulturae (International Society for Horticultural Science) 10: 1-184.
- Dawson, J.W. (1985). Metrosideros bartlettii (Myrtaceae), a new species from North Cape. New Zealand. New Zealand Journal of Botany 23: 607-610.
- Dawson, M.; Hobbs, J.; Platt, G.; Rumbal, J. (2010a). Metrosideros in cultivation: Pōhutukawa. The first of a two-part series. New Zealand Garden Journal 13(1): 10-22.
- Dawson, M.; Hobbs, J.; Platt, G.; Rumbal, J. (2010b). Metrosideros in cultivation: Rātā and other species. The second of a twopart series. New Zealand Garden Journal 13(2): 10-23.
- Dawson, M. and Metcalf, L. (2011). Checklist of Leptospermum cultivars: 2011 update. New Zealand Garden Journal 14(1): in preparation.
- Edwards, B. (1987a). Auckland nursery has pōhutukawas on trial. Commercial Horticulture, May: 18.
- Edwards, B. (1987b). D and D have a new dwarf rata for spring. Commercial Horticulture, May: 19.

- Edwards, B. (1989). Recent New Zealand introductions. Commercial Horticulture, December: 18-21.
- Edwards, B. (1990a). Three new native plant releases. Commercial Horticulture, March: 36-37.
- Edwards, B. (1990b). The parent of Parnell. Commercial Horticulture, June: 30-31.
- Edwards, B. (1990c). More new plants on the NZ scene. Commercial Horticulture, November: 40-41.
- Edwards, B. (1991). In search of the perfect pohutukawa. Commercial Horticulture, April: 48-53.
- Edwards, B. (2000). New pohutukawa cultivars show exceptional promise. Commercial Horticulture, February: 8-9.
- Gaddum, M. (1997). New Zealand Plant Finder. David Bateman, Auckland.
- Gaddum, M. (1999a). The trade Plant Finder 1999-2000. New Zealand Plant Finder, Gisborne.
- Gaddum, M. (1999b). Gaddum's Plant Finder 2000. New Zealand Plant Finder, Gisborne.
- Gaddum, M. (2001). The trade Plant Finder 2001. New Zealand Plant Finder, Gisborne.
- Heenan, P. (1991a). A cultivar checklist for the New Zealand species of Cordyline (Asphodelaceae). Horticulture in New Zealand 2(1): 8-12.
- Heenan, P.B. (1991b). Checklist of Phormium cultivars. Royal New Zealand Institute of Horticulture, Lincoln, New Zealand.

- Heenan, P. (1992). Appendix 1: Checklist of Sophora cultivars. In: The origin of Sophora 'Gnome' and the growth habit of Sophora 'Earlygold'. Horticulture in New Zealand 3(1): 2-6.
- Hobbs, J. (1992). Pohutukawa, jewel of the north. New Zealand Gardener, December: 34-37.
- Hutchinson, C. (1988). New pohutukawas. New Zealand Gardener 44(11): 44-45. (November 1988).
- Metcalf, L.J. (1963). Check list of Leptospermum cultivars. Royal New Zealand Institute of Horticulture (RNZIH) Journal 5: 224-230.
- Metcalf, L.J. (1987). The cultivation of New Zealand trees and shrubs. Reed Methuen, Auckland.
- Metcalf, L.J. (2000). New Zealand trees and shrubs. A comprehensive guide to cultivation and identification. Rev. ed. Reed, Auckland.
- Metcalf, L.J. (2001). International register of hebe cultivars. Royal New Zealand Institute of Horticulture. 232 pp.
- Redgrove, H. (1983). Some new pohutukawas. New Zealand Gardener 40(1): 31-32. (September 1983).
- Simpson, P. (2005). Pohutukawa and rātā: New Zealand's iron-hearted trees. Te Papa Press, Wellington.
- Wikipedia (2010). Metrosideros: http://en.wikipedia.org/wiki/ Metrosideros. (Accessed December 2010).
- Wilson, P.G. (1993). Thaleropia, a new genus for Metrosideros its allies. Australian Systematic

