

## Appendix 4: List of native myrtaceous species in New Zealand (distribution; whether they occur in areas suitable for *P. psidii* s.l.; and biostatus).

Native species	Common name	Distribution (Sources: Salmon, 1980; Allan, 1982; Manaaki whenua Landcare Research Databases, 2011; NZ Plant Conservation Network, 2011; de Lange, DOC, Pers. comm. 2011)	In areas optimal or suitable for <i>P. psidii</i> ?	Biostatus
<i>Kunzea ericoides</i> var. <i>linearis</i> (Kirk) W.Harris	rawiri, manuka-rauriki	Endemic to the northern North Island where it is most abundant from Kaitaia north. In the west it extends south to the Pouto Peninsula but it is very disjunct and generally scarce. In the east it extends almost to Pakiri, then occurs locally around the Waitemata Harbour with spot occurrences on Great Barrier Island, near Miranda and on the Hapuakohe Range.	Yes	At risk/ Declining As per de Lange et al 2009
<i>Kunzea ericoides</i> var. <i>microflora</i> (G.Simpson) W.Harris	prostrate kanuka, geothermal kanuka	Endemic to Taupo Volcanic Zone. Lowland to montane (up to 500 m).	No/Possibly <sup>27</sup>	At risk/ Naturally Uncommon As per de Lange et al 2009
<i>Kunzea ericoides</i> (A.Rich) Joy Thomps. var. <i>ericoides</i>	manuoea, titira, atitira, manuka-rauriki, kanuka	Endemic to the northern South island, north of the Buller and Wairau Rivers; it is most common in North-West Nelson. Ranges from sea level to 1600 m, in the Peel range, Kahurangi National Park.	Yes	Not threatened
<i>Kunzea</i> aff. <i>ericoides</i> (a)	Rawiritoa	Endemic. North and South Islands – mostly westerly in sand country from Te Pahi to Wellington (in the northern and southern parts of its range it extends onto clay soils). On Kapiti Island. Common around the Kaipara and Pouto Sand Tombolo (its national stronghold). In the South Island confined to North-West Nelson where it is common on Farewell Spit. Coastal and lowland sites only.	Yes	At Risk/Declining  As per de Lange et al. (2009)
<i>Kunzea</i> aff. <i>ericoides</i> (b) (includes <i>K. aff. ericoides</i> (f) of de Lange & Murray 2004; de Lange et al. (2005))	Rawirinui, Manuka, Manutoeha	Endemic. North and South Islands (to Dunedin and about Roxburgh). This is the most common <i>Kunzea</i> in New Zealand and the one that is widely mistaken for <i>K. ericoides</i> . It ranges from sea level to 800 m There are at least three races in this species, each is geographically confined.	Yes	Not Threatened
<i>Kunzea</i> aff. <i>ericoides</i> (c)	Makahikatoa	Endemic. North and South Islands – mostly montane to subalpine. In the North Island virtually confined to the Central Volcanic Plateau and eastern Axial Ranges; In the South Island mostly found in the east along the Southern Alps (altitudinal range 100-2000 m)	No/ Possibly (see footnote 8)	Not Threatened
<i>Kunzea</i> aff. <i>ericoides</i> (d)		Endemic. North Island, Bay of Plenty (Thorndon (Walker Road), Ohiwa Harbour (Whangaopikopiko Island). Coastal – on mobile sand	Yes	Threatened/Nationally Vulnerable As per de Lange et al. (2009)

<sup>27</sup> It might be possible that the geothermal areas where this species grows may support microclimates suitable for the establishment of *P. psidii* s.l.. Such microsites already support fern species more typically associated with warm moist climates (e.g. see [http://www.nzpcn.org.nz/flora\\_details.asp?ID=162](http://www.nzpcn.org.nz/flora_details.asp?ID=162) & [http://www.nzpcn.org.nz/flora\\_details.asp?ID=785](http://www.nzpcn.org.nz/flora_details.asp?ID=785) )

Native species	Common name	Distribution (Sources: Salmon, 1980; Allan, 1982; Manaaki whenua Landcare Research Databases, 2011; NZ Plant Conservation Network, 2011)	In areas optimal or suitable for <i>P. psidii</i> ?	Biostatus
<i>Kunzea</i> aff. <i>ericoides</i> (e)		Endemic. Three Kings Islands (Manawatawhi (Great Island), South-West, West Islands). Coastal (up to 400 m a.s.l.) but only on small islands with a coastal climate	Yes	At Risk/Naturally Uncommon (as per de Lange et al. 2009)
<i>Kunzea</i> aff. <i>ericoides</i> var. <i>microflora</i>		Endemic. Moutohoura (Whale Island), Bay of Plenty. Coastal including the geothermally active parts of that island	Yes	At Risk/Naturally Uncommon (as per de Lange et al. 2009)
<i>Kunzea sinclairii</i> (Kirk) W.Harris	Great Barrier Island kanuka	Endemic to Great Barrier Island, where it is only known from the central portion of the island.	Yes	??
<i>Leptospermum scoparium</i> J.R.Forst. et G.Forst. var. <i>scoparium</i> <sup>28</sup>	manuka, tea tree, kahikatoa	Indigenous. Throughout both the North, South and Stewart islands. Scarce north of the central plateau. From sea level to subalpine areas about 1,000 m. Also occurs on the Chatham Islands. It forms extensive areas of scrub. (Also present in Tasmania).	Yes	Non-threatened
<i>Leptospermum scoparium</i> var. <i>incanum</i> Cockayne	kahikatoa	Endemic. Found in Northland. Coastal in sand country and podzols – rarely extending onto clay podzols. Found from Te Paki South to at least Kaitaia.	Yes	Not Listed – deserves listing of either At Risk/Naturally Uncommon or At Risk/Declining
<i>Leptospermum</i> aff. <i>scoparium</i> (a)	Kahikatoa (manuka)	Endemic. North Island (Northland, Auckland, Waikato, Bay of Plenty, Taranaki, Whanganui; less common in Manawatu, Horowhenua, Wellington)	Yes	Not Threatened
<i>Leptospermum</i> aff. <i>scoparium</i> (b)	Kahikatoa (manuka)	Endemic. Three Kings, North Island (mostly easterly and coastal from Te Paki to the Mercury Islands (probably further south than this).	Yes	Not Listed - deserves listing as At Risk/Naturally Uncommon.
<i>Leptospermum</i> aff. <i>scoparium</i> (c)	Kahikatoa (manuka)	Endemic. North Island, Waikato and Bay of Plenty – confined to peat bogs, mostly lowland but with a few sites on the northern Kaimai Range and near Rotorua (at 300 m).	Yes	Not Listed – deserves listing as At Risk/Declining
<i>Lophomyrtus bullata</i> Burret	Ramarama, New Zealand myrtle	Endemic genus. Throughout the North Island and in the Nelson and Marlborough districts of the South Island up to 600 m above sea level in coastal and lowland forests.	Yes	Non-threatened

<sup>28</sup> *Leptospermum* in New Zealand is a species complex awaiting proper study to determine the current diversity; there are probably 15 species (Peter de Lange, Department of Conservation, pers. comm., 2011).

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<i>Lophomyrtus obcordata</i> (Raoul) Burret	Rohutu, New Zealand myrtle	Endemic genus. Throughout the North and South Islands from sea level to 1,050 m in coastal and lowland areas.	Yes	Non-threatened
<i>Metrosideros albiflora</i> Sol. ex Gaertn.	white rata	Endemic. Endemic. North Island. Kaitaia south to Pukemokemoke (north of Hamilton). Mostly in kauri forest – Also on Hauturu (Little Barrier Island) and Aotea (Great Barrier Island).	Yes	Non-threatened
<i>Metrosideros bartlettii</i> J.W.Dawson	rata moehau, Bartlett's rata	Endemic. Te Pahi (Radar Bush, Kohuronaki and Unuwahao). Seriously threatened with extinction – about 34 trees <sup>29</sup> left in the wild.	Yes	Nationally critical
<i>Metrosideros carminea</i> W.R.B.Oliv.	crimson rata, carmine rata	Endemic. North Island. Te Pahi south to Taranaki in the west and Mahia Peninsula in the east. Mostly coastal forest but extending inland up to 500 m.	Yes	Non-threatened
<i>Metrosideros colensoi</i> Hook.f.	Rata	Endemic. North and South Island coastal and lowland forests; scarce north of Auckland with a northern limit at Mangamuka. Mostly on calcareous rocks.	Yes	Non-threatened
<i>Metrosideros diffusa</i> (G.Forst.) Sm.	white rata	Endemic. Found throughout the North, South and Stewart Islands	Yes	Non-threatened
<i>Metrosideros excelsa</i> Sol. ex Gaertn.	pohutukawa, New Zealand Christmas tree	Endemic. In coastal sites around the north island, particularly in the north-east and coromandel. Found inland on the shores of the lakes in the Rotorua district. Pohutukawa has also been planted extensively in parks and gardens, particularly in the North Island, but also around Nelson, on Banks Peninsula and as far south as Dunedin in the east and Jacksons Bay in the West. It is naturalised on the Chatham and Norfolk islands.	Yes	Non-threatened
<i>Metrosideros fulgens</i> Sol. ex Gaertn.	rata	Endemic. Three Kings, North and South Island. Coastal and lowland forest to south of lat. 44° 30'; west of divide in South Island. Awaiting transfer to its own endemic genus.	Yes	Non-threatened
<i>Metrosideros kermadecensis</i> W.R.B.Oliv.	Kermadec pohutukawa	Endemic. Found naturally in the Kermadec Islands. Naturalised in parts of Auckland and on Norfolk Island. On mainland New Zealand it is planted as a street tree in a number of places, including the streets of Wellington. Hybridises freely with <i>M. excelsa</i> and many 'wild' occurrences in the North Island are hybrids.	Yes <sup>30</sup>	Uncommon
<i>Metrosideros parkinsonii</i> Buchanan	Parkinsons rata	Endemic. On Aotea (Great Barrier Island – Hirakimiata) and Hauturu (Little Barrier Island, Orau) and in the South Island in the north-west Nelson area and the Paparoa ranges, south to near Greymouth. The tree grows from sea level to 920 m.	Yes	Non-threatened

<sup>29</sup> According to the NZ Plant Conservation Network, 2011; See [http://www.nzpcn.org.nz/flora\\_details.asp?ID=24](http://www.nzpcn.org.nz/flora_details.asp?ID=24)

<sup>30</sup> Although the Kermadec Islands were not included in the modelling by Kriticos & Leriche, 2008, it is expected that the climate is suitable because these islands lie north east of New Zealand in a sub-tropical to tropical climatic zone.

Native species	Common name	Distribution (Sources: Salmon, 1980; Allan, 1982; Manaaki whenua Landcare Research Databases, 2011; NZ Plant Conservation Network, 2011)	In areas optimal or suitable for <i>P. psidii</i> ?	Biostatus
<i>Metrosideros perforata</i> (J.R.Forst. et G.Forst.) A.Rich.	white rata	Endemic. Three Kings, North and South Islands. Coastal to lowland forest and margins to Banks Peninsula on east and Martin's Bay on west.	Yes	Non-threatened
<i>Metrosideros robusta</i> A.Cunn.	Northern rata	Endemic. North and South Island (to Lake Mahinepua south of Hokitika). Coastal to montane forest; formerly widesprerad but now scarce over larger parts of its range due to forest clearance and possum browse.	Yes	Non-threatened
<i>Metrosideros umbellata</i> Cav.	Southern rata	Endemic. North, South, Stewart and Auckland Islands. North Island scarce. Widespread in the western portion of the South Island but scarce in the east until the Catlins. Common on Stewart and Auckland Islands. In the North Island it is virtually confined to sites above 500 m. Otherwise from sea level to 1200 m.	Yes	Non-threatened
<i>Neomyrtus pedunculata</i> (Hook.f.) Allan	rohutu, myrtle	Endemic Genus. Throughout North, South and Stewart Islands but uncommon north of Auckland (lowland to montane forest) – northern limit Awanui (Kaitaia)	Yes	Non-threatened
<i>Syzygium maire</i> (A.Cunn.) Sykes et Garn.-Jones	swamp maire, maire tawake	Occurs in lowland swampy and boggy forests from sea level to 450 m throughout the North Island, and northern tip of the South Island (Rarangi, near Blenheim).	Yes	Non-threatened