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J. W. Dawson

To cite this article: J. W. Dawson (1985) *Metrosideros bartlettii* (Myrtaceae) a new species from North Cape, New Zealand, *New Zealand Journal of Botany*, 23:4, 607-610, DOI: [10.1080/0028825X.1985.10434231](https://doi.org/10.1080/0028825X.1985.10434231)

To link to this article: <http://dx.doi.org/10.1080/0028825X.1985.10434231>



Published online: 04 May 2012.



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Metrosideros bartlettii (Myrtaceae) a new species from North Cape, New Zealand

J. W. DAWSON

Botany Department
Victoria University of Wellington
Private Bag, Wellington
New Zealand

Abstract *Metrosideros bartlettii* from forest remnants near Cape Reinga at the northern tip of the North Island, New Zealand is described. It is a tree, frequently epiphytic initially, with distinctive whitish, spongy bark and small, white flowers. To date, seven trees have been discovered in two valley head forest remnants. They all grow alongside streams or at the margins of a swamp.

Keywords *Metrosideros*; *Metrosideros bartlettii*; Myrtaceae; new species; plant taxonomy; New Zealand

INTRODUCTION

New species are still being described for the New Zealand flora, but in some cases they have not been newly discovered, but have lain in herbaria awaiting a specialist to recognise their status. Among new species that have also been newly discovered the species described here is remarkable. It is not a small plant easy to overlook, but a large tree up to 25 m in height with trunks a metre or more in diameter. At present it is known from seven trees in two bush patches 10.8 km apart on the Te Pahi range of hills leading to Cape Reinga at the northern-most extremity of the North Island.

DESCRIPTION OF NEW SPECIES

Metrosideros bartlettii J. W. Dawson sp. nov.

(Fig. 1, 2)

Arbor saepe primo epiphytica, cortice albedo, molli, foliis 3–4.5 × 1.5–2.3 cm, elliptici vel ovatis, nervis manifestis, floribus parvis, albis praedita.

HOLOTYPE: Forest remnant near beginning of Spirits Bay Road, Te Pahi Farm Park, N. M. U. Clunie, 21.11.1984, CHR 417269

ETYMOLOGY: The species is named after its discoverer, Mr J. K. Bartlett.

DESCRIPTION: Tree up to 25 m with a trunk up to 1 m or more in diameter, often initially epiphytic on trees or tree ferns; bark pale grey to whitish, spongy, separating into soft flakes; young twigs often dark red, 4-angled to rounded and with long-persistent, white spreading hairs.

Leaves chartaceous to coriaceous, palish-green, young leaves pubescent marginally and on the midribs and petiole, the hairs tending to persist on midribs and petioles; petioles 4–5 × 1 mm; lamina 3–4.5 × 1.5–2.3 cm, elliptic to ovate, cuneate at the base, acute to attenuate at the tip, the latter often twisted, upper surface shiny with evident veins, lower surface glossy with entire vein network evident and oil glands obscure, midrib raised below, impressed above.

Inflorescences with 3–4 pairs of cymules and a moderately dense tomentum of spreading white hairs; peduncles up to 9 × 1 mm; bracts and bracteoles not seen.

Flowers white; pedicels up to 3 × 1 mm; hypanthium 2.5–3 mm high × 2–2.5 mm wide; sepals triangular, spreading, 1–1.5 × 1–1.5 mm; petals elliptic to ovate, 2.5–3 mm × 1.8–2 mm; stamens 5–9 mm long; style 10–11 mm long; ovary half superior.

Fruit hypanthium puberulent, 2–2.5 mm high × 2.5–3 mm wide, sepals persistent, deflexed, capsules exerted for 1.5–2.5 mm. Seeds not seen.

DISTRIBUTION AND ECOLOGY: The species was first discovered by John Bartlett in 1975 in Radar Bush about 9.5 km S.E. of Cape Reinga. (Fig. 3). What drew the largest tree to Mr Bartlett's attention was the distinctive nature of the bark. It is almost white in colour, soft and spongy, and separates in thin flakes. This tree is too tall for the foliage to be easily reached, but a second smaller tree was blown over

Year of effective publication of the name *Metrosideros bartlettii* J. W. Dawson is 1986.
Received 10 May 1985; accepted 10 June 1985



Fig. 1 Trunk of *Metrosideros bartlettii*. Radar Bush.

nearby (it has since died) and foliage, but no flowers or fruits were obtained from it in 1977.*

At the second locality, discovered in 1984 by Peter Anderson near the beginning of the Spirits Bay road, one medium-sized tree of the species in a valley-head bush patch is epiphytic on a puriri (*Vitex lucens*). At the head of the swamp below the bush patch three small trees are epiphytic on now dead tree ferns (*Cyathea medullaris*) with their roots

growing down into the swamp. A large tree at this locality is growing on a clay terrace just above the swamp. It has a short stout trunk and if it began life as an epiphyte it would probably have been on a tree fern. The large tree at Radar Bush has a tall trunk of coalesced roots so the original supporting tree must have been equally tall.

M. bartlettii is usually found growing in or near wet places. At Radar Bush the large tree is right beside the stream with a large root extending across it. The tree epiphytic on a puriri at the second locality overhangs a deep pool in the stream.

SPECIMENS EXAMINED: Radar Bush, CHR 280509, 280510 Bartlett, July 1978; WELTU 14428 Julian,

*A third small tree was found by Bartlett in 1976, but has not yet been relocated.

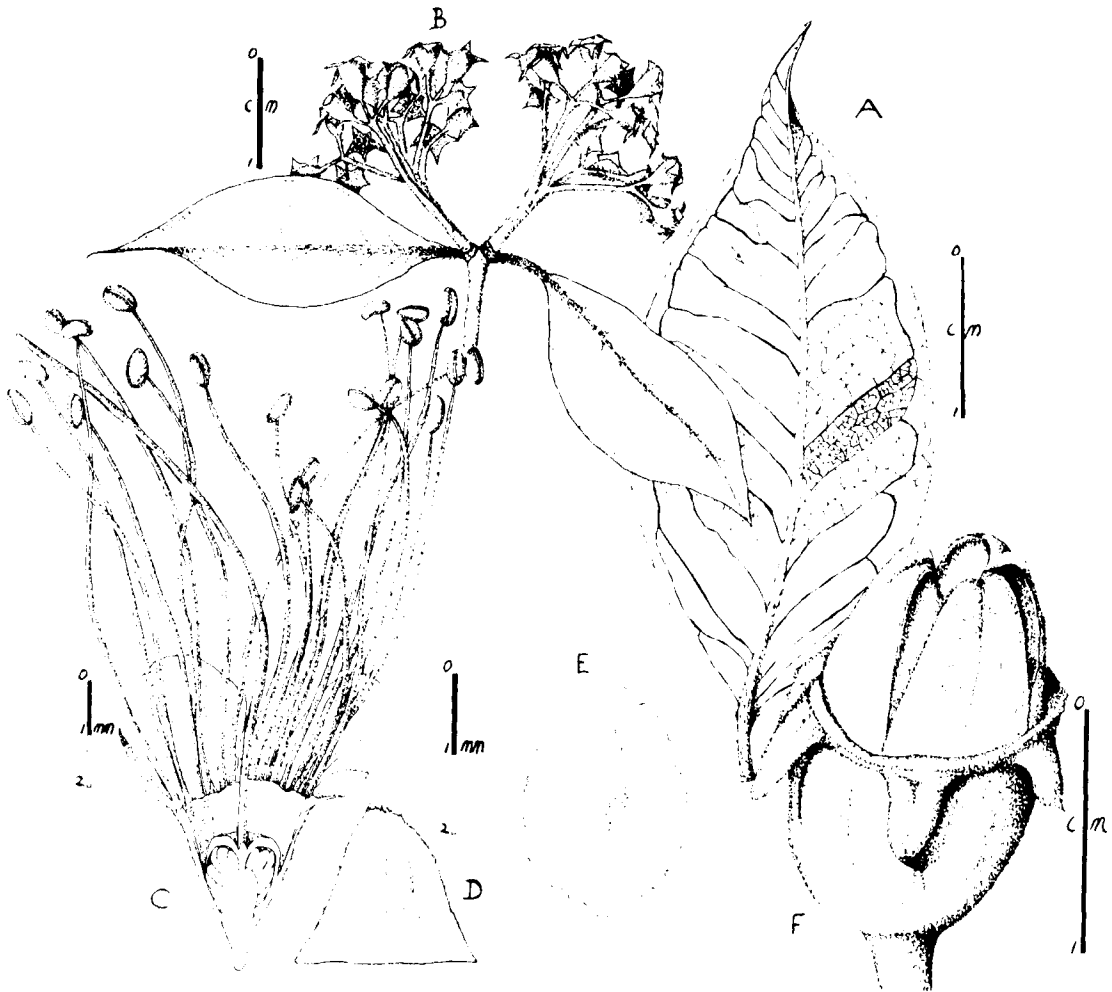


Fig. 2. *Metrosideros bartlettii*. A. Leaf, abaxial view; B. Pair of young infructescences; C. L. S. flower; D. Sepal; E. Petal; F. Dehiscent fruit. (A, C-E. WELTU 14429 -isotype; B. Preserved material from type locality. Coll. J. W. Dawson; F. WELTU 14428).

January 1983. Spirits Bay Road, WELTU 14429 (isotype), Clunie, November 1984; WELTU 14431 Clunie, October 1984; WELTU 14432 Dawson, December 1984.

TAXONOMIC COMPARISONS: The leaves are similar in size to those of northern (*M. robusta*) and southern (*M. umbellata*) rata and share some of their characteristics. They have acuminate apices like southern rata and a completely visible vein network abaxially as in northern rata. This might suggest the possibility of hybridism, but the distinctive nature of the bark alone would rule this out. No

other tree species of *Metrosideros* has bark of this type. Furthermore, when flowers were eventually obtained in November 1984 it was clear that a new species was involved. The flowers are even smaller than those of northern rata and pure white in colour. Nigel Clunie, who was the first to see the flowers, described them as like snow over the tree crowns. Some vine species of *Metrosideros* in New Zealand also have white flowers, but *M. bartlettii* is certainly not a vine and is also quite distinct from the white-flowered vines in other respects. The only other tree species of *Metrosideros* with small white flowers is *M. oreomyrtus* of New Caledonia.

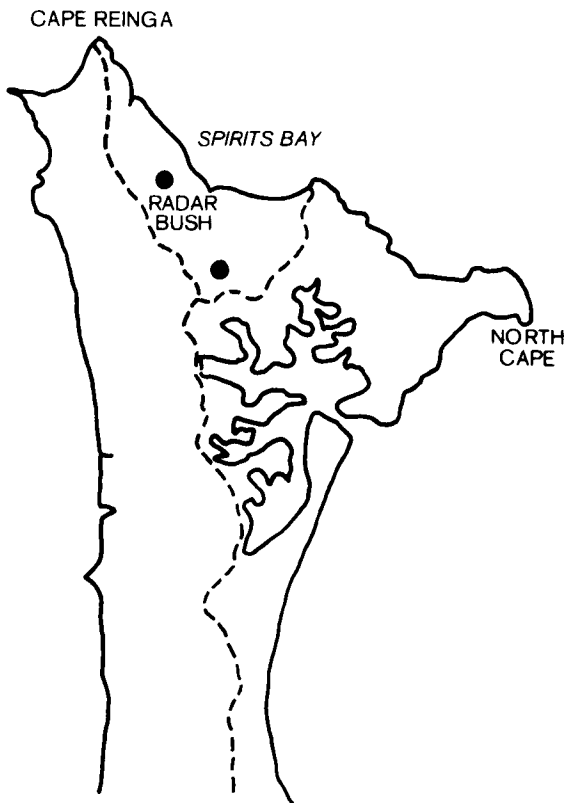


Fig. 3 Localities of *Metrosideros bartlettii*.

Old fruits of *M. bartlettii* were collected from among leaf litter. They are much smaller than those of *M. robusta* but have similar strongly exerted capsules. Another similarity to *M. robusta* is the "strangling" epiphyte habit.

ACKNOWLEDGMENTS

I am grateful to Mr J. K. Bartlett and Dr N. M. U. Clunie for specimens and for helpful information and comments; to Dr Elizabeth Edgar for correcting the latin diagnosis; and the Internal Research Committee, Victoria University for a grant enabling me to study the species in the field.