

New Location of *Baumea complanata* at Shenstone, Te Paki, northern New Zealand

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Te Paki Recreational Reserve covers the western two thirds of the top of New Zealand's northern-most mainland peninsula centred at 34° 29' S, 172° 47' W. The reserve comprises 18,878 ha including the 400 ha Shenstone Block that was added to the reserve in the last 10 years.

The substratum of the Shenstone Block is a base of sandstone and mudstone which has been eroded to give rise to sandy and silt loams. The topography comprises rolling hills from which deep steep-sided gullies have been etched out by flowing water. These hills are clothed mainly in manuka/kanuka (*Leptospermum scoparium* / *Kunzea ericoides*) forest which has been invaded by woolly and prickly hakea (*Hakea gibbosa* and *H. sericea*). In the western part of the block, wetlands of *Baumea* and *Gleichenia* species have formed at the base of the hills.

A rare plant of the Shenstone area is *Todea barbara*. It was while monitoring this fern, on 30 September 1997, I discovered the new colony of *Baumea complanata*.

The Shenstone population of *Baumea complanata* covered an area approximately 30 m x 10 m, numbering hundreds of individuals. It was so dense that it excluded all other species except for

occasional manuka. The average height of the plants was approximately 1 m. The plants were in all stages of maturity including juveniles, flowering adults, plants with new green nuts and the previous year's mature nuts. One plant had both green and mature nuts.

The site itself is in the streambed of a shallow gully 50 - 70 m from the main vehicle track. The centre of the population is in the open, with the edges creeping up the banks under a manuka overstorey.

Previously, this endangered sedge was thought to persist only at Ngawha, 5 km from Kaikohe. There are historic records for the Kaikohe District, Whangarei District and further south in the Waikato and Bay of Plenty regions, but recent investigations suggest that those populations have gone. Their discovery in the Te Paki Recreational Reserve is the first recorded location north of the Hokianga Harbour. In 1997 another new site was discovered in the Waipoua Forest by S. T. King.

Below is a copy the known historic records of its Northland distribution as compiled by Michael Heads for the Northland Conservancy, Rare Plants Manual. Not all records have complete details as vague location records have meant that precise map references cannot be given.

Current records

Te Paki Ecological District

Te Paki

McCluggage, A. P., 30 Sep 1997. AK 245950.

Kaikohe Ecological District

Ngawha

Rawlings, G. B., 2 Jun 1972. Fruits in seed herbarium also. CHR 224742.

Rawlings, G. B., 1 Nov 1972. Specimen flowering. CHR 224795.

Gardner, R. O., 4 Nov 1978. Ngawha Springs, About 300 clumps seen 1.5 - 2 m tall in manuka/*Gleichenia dicarpa* (as *G. circinata*) scrub on mud and peat by lake. AK 145262 & 148969.

Gardner, R. O. & Bartlett, J. K., 4 Nov 1978. In 1.5 - 2 m tall *Gleichenia dicarpa* (as *G. circinata*) scrub in mud and peat on lake edge. Specimen flowering. c. 300 clumps seen. CHR 327624 & 353561.

Gardner, R. O. 2112, 4 Nov 1978. In *Leptospermum* scrub by lake edge, on mud and peat. CHR 353558.

Wardle, P., 4 Jan 1979. Fruiting, road shrub. CHR 321252.

Given, D. R. & Clunie, N. M. U., 13 Mar 1984. In *Leptospermum* scrub.

Given, D. R. & Clunie, N. M. U., 13 Mar 1984. In *Leptospermum* scrub on gentle slope, geothermal site.

Forester L. J., 20 Jan 1989. Edge of thermal lake growing in damp kauri duff with *Gahnia* spp., manuka. AK 185521.

de Lange, P. J., 20 Oct 95. A seedling grown on from seed collected in the wild on 10 Nov 1990. Collection represents second flowering of seedling specimen cultivated at Percy Reserve, Wellington. AK 228106.

Ohaeawai

Bergren, S., 1 Apr 1974, Isotype. WELT.

Taheke

de Lange, P. J., 2 Jan 1988. Manuka scrub - typical gumland - hakea/manuka scrub with understorey of *Schoenus brevifolius*. CHR 440082.

de Lange, P. J., 2 Jan 1988. 30 m, manuka scrub - typical gumland vegetation - hakea/manuka scrub on roadside. Fairly damp clay with peat organic soil c. 15 m thick.

Tutamoe Ecological District

Waipoua Forest

King, S. T., 9 May 1997, mature kauris forest AK 232744-45.

Historic records

Whangarei Ecological District

Wairua River

Thomson, A. CHR 295059.

Tangihua Ecological District

Maungatapere

Carse H. In swampy forest. Very rare, probably now extinct CHR 295060.

Carse H., 4 Dec 1897. Mangare Falls, Wairua River, 13 miles from Whangarei. Q06 12-12-; WELT.

Carse, H.H., 1 Feb 1897. CHR.

Carse H., 1 Mar 1898. Maungatapere, Whangarei. WELT.

Maungatapere

Carse, H., AK 2218.

Carse, H., 12 Jan 1898. AK 2217.

Carse, H., Mar 1898. AK 214180.

Carse, H., Mar 1898. AK 2219.

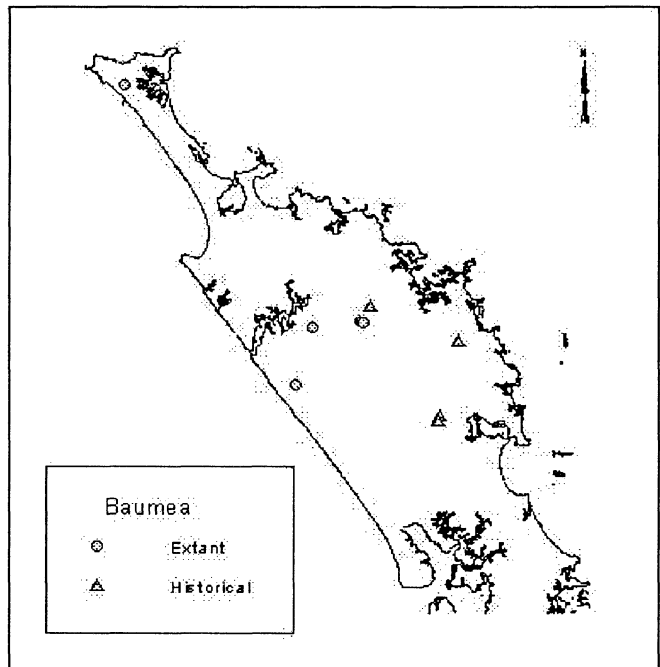


Fig.1. Records of *Baumea complanata* in Northland.

Kaikohe Ecological District

Ohaeawai

Berggren. CHR, OTA, WELT. Presumed extinct.

Buchanan. [Moore & Edgar say a piece of the isotype at K is at OTA (in the Buchanan collection) but this was not found]. OTA.

Whangaruru Ecological District

Puhipuhi

Kirk, T., 1 Mar 1888. WELT. Presumed extinct.

Kirk, T., 1 Mar 1888, Puhipuhi. WELT.

Meremere Ecological District

Huntly

Cook, V.J., Sep 1946, 17 May 1972. AK 22279-81.

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References

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