

Korthalsella salicornioides discovered close to Auckland City

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Lynfield discovery:

On the 20 February 2001, Collin Bradshaw brought in a piece of manuka (*Leptospermum scoparium*) with "unusual growth on it" for me to comment on. The unusual growth was *Korthalsella salicornioides*, a native dwarf mistletoe in the family Viscaceae (formerly included in the Loranthaceae and now separated on the embryology). The piece of manuka had been forwarded to him from a fellow Auckland City Council staff member, Glenn Mcrae. Glenn had collected it from the margin of the Manukau Domain in Lynfield, which is in the Tamaki Ecological District. It is exciting to think of this mistletoe growing only 10 km away from central Auckland.

After contacting Glenn, I inspected the Lynfield site on 4 March. The northern portion of the Manukau Domain (by Halsey Drive) is a mown grass field of easy contours where dogs are exercised. The south-east boundary of this field is regenerating native bush, part of the continuous coastal forest along the northern side of the Manukau Harbour. The bush fringe along the side of the Domain field is dominated by manuka, associated with other species, including mapou (*Myrsine australis*), hangehange (*Geniostoma rupestre*), karamu (*Coprosma robusta*), mahoe (*Melicactus ramiflorus*), houpara (*Pseudopanax lessonii*), kanuka (*Kunzea ericoides*), tauhinu (*Pomaderris phyllicifolia* var. *ericifolia*), flax (*Phormium tenax*), *Lepidosperma laterale*, bracken (*Pteridium esculentum*), *Gleichenia microphylla*, *Lobelia anceps*, and exotic species, *Pinus* sp., *Hakea sericea*, wattle (*Acacia* sp.) and pampas grass (*Cortaderia jubata*). This upper manuka margin is dominated by 'gumland' (for definition see Beaver 1982) species on infertile soil. Apart from adjacent lawn specimens of karaka (*Corynocarpus laevigatus*), pohutukawa (*Metrosideros excelsa*), puriri (*Vitex lucens*), totara (*Podocarpus totara*), nothing appeared to be planted.

There were several hundred *K. salicornioides* plants present, some only a few mm tall. All were parasitic on manuka 2-4(-6) m tall, along the bush edge (for about 150 m). On individual hosts, mistletoes were occasional to locally abundant; most of the manuka with abundant mistletoes looked unhealthy (sparse-leaved); some dead standing manuka was also present (killed by mistletoes?). Although the number of individual hosts was difficult to count because many appeared to be multi-stemmed at ground level, there were about 100 manuka "clumps" observed with parasitic *K. salicornioides*. All these were by the field, less than 5 m in from the grass margin. From a cursory search, no other mistletoes were seen away from this margin.

Records of *K. salicornioides* from the Tamaki Ecological District (09.03)

The notes below are based on searching two Auckland herbaria (AK & AKU), requests to other herbaria (CHR, NZFRI, WAIK, WELT), four records from Bec Stanley (pers. comm.), and one personal observation.

- T. Kirk Herbarium*, Nov 1872, Hobson Bay, WELT 31427 (undated), 31429 (dated), [on manuka];
- T. Kirk*, undated, Waitemata, WELT 31027, on manuka;
- T. Kirk*, 6 Feb 1866, Auckland, Ahatawapa, WELT 31423, 31428, 31429, [on *Kunzea ericoides* var. *linearis*]. The exact locality of Ahatawapa is unknown, but according to Hamlin (1965) Kirk collected 5th and 6th Feb 1866 at Papatoitoe (Papatoetoe), and 6th at Ahatawapa- Ouraki (Orakei?) Bridge. Alternatively it could possibly be 'Awataha' – a well known Maori village on the North Shore (where Akoranga Drive runs off the motorway) until the 1919 flu epidemic, and Ouraki (= Hauraki?) (N. Prickett pers. comm.).
- T.F. Cheeseman*, undated, Judge's Bay, Parnell, AK 3867, [on manuka];
- J. Prickett*, Aug 1946, Albany, side of road, AK 22152-53, abundant [on manuka];
- G.C. Mcrae*, 20 Feb 2001, Lynfield, AK 252589, only on manuka.

Records of *K. salicornioides* from the rest of the Auckland Region (Ecological Districts 08.01 to 10.02) Kaipara Ecological District (08.01):

Although there are no confirmed records within the Auckland Region part of this Ecological District, there are two historical collections from the north side of this boundary and one unspecified record:

- Paparoa area [Paparoa, *T. Kirk*, undated (1860s), WELT 31028, on manuka; Te Pahi, *T. Kirk Herbarium*, undated (1867?), WELT 31026, on manuka];
- Kaipara [*T. Kirk* (F.G. Gibbs Herbarium), CHR 115830, on manuka].

Rodney Ecological District (09.01):

- Silverdale [*F.W. Bartlett*, 16 Sep 1936, AK 103412, on manuka; Stoney's Road, *H.H. Allan*, 21 Oct 1944, CHR 48070, on manuka; *L.H. Millener*, Sep 1946, AKU 2379, on manuka; *R.C. Cooper*, 27 Aug 1948, AK 24031, on manuka; Leigh Road, *C.C. Ogle*, 25 Jun 1966, AK 224187, on manuka; *E.M. Dickson*, 11 Jul 1972, AKU 2389; Leigh Road,

A.E. Esler 4046, 7 Jul 1972, CHR 236625, on manuka];

- Whangaparaoa [*H.R. McKenzie*, 18 Nov 1940, AK 211611; Army Bay, *G.D. Hambly*, 10 Jul 1993, AK 213568, only on manuka; Shakespear Regional Park, on 4-5 large manuka, A. MacArthur (Bec Stanley pers. comm., Apr 2000)].

Waitakere Ecological District (09.02):

- Winstone Track [*D.W. White*, 5 May 1979, CHR 357522, and noted in the locality in 1963 by D. White; *T. Stein*, 21 Oct 1995, AK 224119, c.30 plants on kanuka; Bot Soc visited this site on 19 May 2001 and saw only a few plants parasitic on manuka (pers. ob.)].

Awhitu Ecological District (09.06)

- Hatton Road [A. MacArthur, 1970, on manuka (Bec Stanley pers. comm.)].

Hunua Ecological District (09.08)

- Orere Point [A.D. Thomson, 1945, on manuka (Bec Stanley pers. comm., 2000)].

Little Barrier Ecological District (10.01):

- [*E.M. Smith*, 1897, AK 118135, on kanuka; *F.T. Shakespear*, 1899-1902, AK 3866, 127550, on kanuka].

Great Barrier Ecological District (10.02):

- central Great Barrier [Okupu, *H.M. Howard*, Jan, 1951, AK 36264, on manuka; Harataonga, *R. Colgan*, Nov 1960, AK 70211, on manuka; Awana, *R.C. Cooper*, 30 Sep 1964, AK 119009 & 218794, on manuka; Mt Young, *P.J. de Lange 3857 & G.C. Platt*, 31 Mar 1999, AK 237879 (dup CHR 493807), on *Kunzea sinclairii* - common; Tramline Track,

DoC staff, on manuka (Bec Stanley pers. comm.)];

- northern Great Barrier [Ahuriri, *E.K. Cameron*, 5177, 31 Dec 1988, AKU 21476, only on kanuka].

Auckland hosts

- kanuka (*Kunzea* aff. *ericoides*)– Waitakeres (AK 224119), Little Barrier (AK 3866, 118135, 127550), northern Great Barrier (AKU 21476);
- *Kunzea sinclairii* – central Great Barrier (AK 237879);
- *Kunzea ericoides* var. *linearis* – Ahatawapa (WELT 31423, 31428, 31429);
- manuka – all other records, and clearly the most frequent Auckland host.

Additional comments

The only reference to *K. salicornioides* in the Auckland Bot Soc *Newsletter* and *Journal* that I found was by Horsman (1966) reporting it parasitic on manuka at Frank Bartlett's 'Bankside' property at Silverdale. This is supported by Bartlett's collection from there and probably the other Silverdale collections as well. The Bankside property was sold some time ago, and recently affected in only a minor way by the extension of the new northern motorway.

K. salicornioides is nationally ranked as 'Naturally Uncommon: Sparse' (de Lange et al. 1999) and we are fortunate to have perhaps the largest regional population of *K. salicornioides* right on our city doorstep. Keep your eyes open for others. Great Barrier is obviously another regional stronghold. Visit the Lynfield site and admire the *K. salicornioides* for yourselves, but please refrain from picking it.

Acknowledgements

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References

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Corrigendum: Ref. Enid Asquith 2000 in *Auckland Botanical Society Journal* 55(2): 97.
That article should have been titled **Remembering Phil Gardner** (a spelling correction).



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