SOME LOCALITIES FOR PYGMY MISTLETOES IN CANTERBURY

COLIN BURROWS

The genus *Korthalsella* (mistletoe family Viscaceae) includes about 20 small species, spread from Ethiopa and Madagascar, through the islands of the Indian Ocean to India, China, Taiwan, Japan and south through Malaysia and Indonesia to Australia and New Zealand and, finally, across vast ocean space, eastward to Hawaii and Henderson Island. It is well-represented in Canterbury, by three species. The most frequently-encountered is *K. lindsayi*. However it, and the others are quite cryptic; one has to have the right search image for pygmy mistletoes! *K. lindsayi* occurs in many lowland places from Kaikoura and the foothill ranges, to Banks Peninsula. Its host range is wide, on shrubs and trees. It grows at least as far inland as Marble Point in the Waiau Valley, the Rakaia Gorge and Mt Somers. The most interesting host association in which I have seen it was on *Ileostylus* (*Loranthus*) *micranthus*, common mistletoe, itself growing on *Coprosma propinqua*, on a small "island" surrounded by estuarine mud, near Westport.

The second pygmy mistletoe found in Canterbury is *K. clavata*. It was originally described from Castle Hill Basin, by T. Kirk, in 1892 (as *Viscum clavatum*). There, it parasitized *Discaria toumatou*, *Coprosma* spp. and *Aristotelia fruticosa*. T.F. Cheeseman (1906) transferred it into the genus *Korthalsella* in 1906, but H.H. Allan (1961) followed B.H. Danser (1937) in reducing it to a variety of *K. lindsayi*. Danser revised his earlier opinion, again giving *K. clavata* specific status and this practice was followed by B.P.J. Molloy (1976) and Lucy Moore and J.B. Orwin (1978). The overall character of *K. clavata* certainly seems distinct enough for it to be regarded as a species in its own right. A detailed study of the life history of New Zealand *Korthalsella* spp., by Greta Stevenson (1934) is still the most informative account of the group in this country.

Up to the time of publication of Allan's Flora, Vol I, Castle Hill was the only published locality for *K. clavata*. I had actually collected it, in 1950, at Red Lakes, near Lake Coleridge, on *Coprosma propinqua* (Table 1) but didn't know the significance of my find, or its true identity. In 1985 I collected it again from this location, but mistook it for *K. salicornioides* (C.B.S.J. 21, p. 31). Since then I have found it in various other places in the Canterbury mountains and, of course, it is known from other places too (cf. C.B.S.J. 17, 1983; Molloy 1976). Most recently (January 1995) I found a good colony of *K. clavata*, on *Discaria*, beneath Cotton's Sheep Range, near the western end of Lake Coleridge. In January 1994, I found it present in great abundance on *Discaria*, on terraces in the Potts River Valley, Rangitata Catchment. Almost every *Discaria* bush in that location was covered with it. It would seem to make sense for a parasite to attack *Discaria*, since the latter has a nitrogen-fixing association on its roots, which could be beneficial for the nutrition of the parasite. *Ileostylus* is often found on *Sophora*, probably for this reason (and *Tupeia* on tree lucerne, *Chamaecytisus palmensis*). However *Ileostylus* rarely attacks *Discaria*.

A fourth locality for *K. clavata* is in the upper South Ashburton River Valley in the Arrowsmith Range, growing on *Coprosma propinqua*. I mistook it for, and recorded it as, *K. salicornioides* so here I can formally set that erroneous record right, also (Burrows et al. 1993, p 163). *K. clavata* has rather dark, sometimes faintly mottled, narrow, slightly flattened stem segments, contrasting with the light green (sometimes yellowish-green), wide flat stem segments of *K. lindsayi*. Look out for it on shrubs in old scrub, undisturbed by recent fire.

Table 1 Localities Noted in this Article for *Korthalsella* spp. in Canterbury

		Grid Reference (NZMS 260)
K. clavata	Red Lakes, near Lake Coleridge	K35/979632
	Cotton's Sheep Range, Lake Coleridge	K34/863722
	Potts River Valley, Rangitata Catchment	J36/483367
	Upper South Ashburton Valley	J35/522502
K. salicornioides	Coleridge Creek Gorge, near Lake Coleridge	K35/981622

The third species, *K. salicornioides* may be less common in Canterbury than either of the other two. I have only seen it once (but cf. C.B.S.J. 17, 1983, p 37). It is very distinct from the other species; its stems are terete and light green in colour, looking very like a tiny *Salicornia*. On the Society's excursion to the Lake Coleridge area in February of this year we found it to be quite abundant on *Kunzea ericoides*, at Coleridge Creek Gorge. The bright green stems of *K. salicornioides* showed up clearly against the duller green of its host's foliage. Curiously enough this site is less than a kilometre away from my find locality for *K. clavata*, at Red Lakes.

Although *K. salicornioides* is said by Cheeseman (1925) and Allan (1961) to parasitize *Gaultheria* and *Dracophyllum*, Brian Molloy (pers. comm.) tells me that he has never seen it living, or as voucher specimens, on any hosts other than manuka (*Leptospermum scoparium*) or kanuka (*Kunzea ericoides*). Again, look out for it on old plants of these two species.

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