have not seen this species in the Waikato since. Maybe those immature plants I saw at Huntly never made it to maturity?

References

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Drury, D. G. 1974: Illustrated and annotated key to the erechtitoid *Senecios* in New Zealand (Senecioneae-Compositae) with a description of *Senecio diaschides*. *New Zealand Journal of Botany 12*: 513-540.

Webb, C. J. 1989: *Senecio esleri* (Asteraceae), a new fireweed. *New Zealand Journal of Botany 27*:565-567.

"Alien Plants of the British Isles" by E. J. Clement and M. C. Foster. Botanical Society of the British Isles. London. 1994. 590 pp.

Reviewed by R. O. Gardner

This hefty handbook stands somewhere between a List and a Flora, pronouncing on (to use the authors' expression) four thousand two hundred plants not native to the British Isles. Ferns and gymnosperms are included, but not the grasses, which will get their own volume.

Aliens are plants which have been found in the wild, but by no means all are "properly" naturalised, some, for example, just being plants that have been deliberately put into otherwise natural habitats.

There are three "categories of persistence".

- casual - not persisting in a locality for more than two years without re-introduction;
- persistent - remaining longer than two years but unlikely to be permanent, not reproducing by seed or vigorously spreading vegetatively;
- established - likely to remain permanently, at least one colony either reproducing by seed or vigorously spreading vegetatively.

Two other terms are frequently used:

- introduced - deliberately planted or sown in the wild;
- naturalised - established extensively among native vegetation so as to appear native.

Aliens are further described by their most common mode of introduction to the country - "ballast weed", "wool alien" i.e. plants growing from seed brought in baled wool, "bird-seed contaminant", "soya bean impurity", "garden discard", etc.

New Zealand natives feature fairly well, though quite a number of wool aliens that we share with Australia - daisies, rushes and the like, might have entered from that country. We do best with garden escapes, where even a single seedling alongside the parent plant qualifies for a entry. Listed among other NZ species and hybrids are four acaenas, six carices, four cotulas, five epilobiums, twelve hebes, seven olearias, and three pittosporums. These plants occur mostly in the laxer climates, especially in the southwest. Typical entries are:

Coprosma repens An established garden escape; abundant near St Warna's Well, St Agnes, and bird-sown in woodland on Tresco and on walls at Porthcressa beach, St Mary's (all Scilly) [where it baffles visitors with the name tree bedstraw].

Griselinia littoralis Seedlings have been recorded from Penzance (W. Cornwall), Rhu (Dunbarton), on sea-cliffs near Kilmelford (Main Argyll)...

Leptospermum scoparium A garden escape well established in Abbey Wood on Tresco (Scilly); seedlings reported from Penzance (W. Cornwall).

Muehlenbeckia complexa, or wireplant. Long-naturalised on rocky slopes, in quarries and along hedgebanks in Scilly and the Channel Is.

The book contains no key or descriptions. Instead, each taxon is accompanied by a list of references and illustrations, and an indication of the number of localities it has been recorded from in the last sixty years. Many of the New Zealand and other alien plants are quite local in Britain, and the information in this book might give some practical help to homesick OEers. But it would be a guilty pleasure to seek out *Crassula helmsii*, which is called here, rather unfairly, New Zealand pygmyweed (it is native to Australia as well). It has the longest entry in the book, and is an awful reminder that plant introduction is not an exact science: "Introduced on oxygenating plants, or accidentally with ornamental aquatic plants, now well-established and abundant in ponds, reservoirs and canals in widely scattered localities throughout the British Isles; increasing rapidly, already a threat to native vegetation in some areas."

Kemp Rd Bush, Awhitu Peninsula

Chris Green and Marjorie Cutting

Introduction

We were asked to survey the native vegetation on the property of Mr Andrew Hastings. Mr Hastings' property is part of a larger forest area, known as the Kemp Rd Bush, which is a Site of Special Wildlife Interest [1]. Kemp Rd Bush is about 170 hectares in size and is one of the larger native forest remnants left on the Awhitu Peninsula, located immediately south-east of Awhitu Central. It lies on the southern side of Awhitu Central Road which runs along the crest of a prominent east-west aligned ridge. This area includes one of the highest points (165 m asl) on the Peninsula. From this ridge the bush drops steeply to the south, into a valley which forms the top of a moderate sized catchment of the Kauritutahi Creek. Kauritutahi Creek flows into the Manukau Harbour just north of Awhitu Regional Park.

Kemp Rd Bush is an area of strongly regenerating forest with pockets of mature forest remnants (grid reference Q12 525 547). The forest block was observed from a number of vantage points and four excursions into the bush were made on 29 July 1994.

Vegetation of the Awhitu Ecological District

Cameron (1994) described the general geology of this district as well as the level of vegetation clearance and the general nature of the vegetation and fauna. It is our intention in this discussion to merely focus on the past vegetation history, and describe the current patterns of the indigenous vegetation surrounding and within Kemp Rd Bush.

Vegetation History of the Awhitu Peninsula

Recent research studying pollen and fossil leaves indicates that over 380,000 years ago the Awhitu Peninsula was covered with a mature warm temperate lowland forest. Major taxa recorded from pollen and fossil remains indicate that *Metrosideros*, kauri, *Libocedrus*, *Ascarina lucida*, taraire, tawa, totara and titoki (amongst others) were present (Newman & Lusk, 1990).

More recent history indicates that a large kauri forest was present in the northern part of the peninsula until it was milled in 1835 and the timber towed to Onehunga (Muir, 1957). Historical commentary testifies that kauri gum was dug around Awhitu and the northern part of the peninsula. It is reasonable therefore to speculate that Kemp Rd Bush could contain remnants of that older kauri

1. Sites of Special Wildife Interest are areas identified by the Department of Conservation for their wildlife habitat values.