*Raukawa anomalus (*syn. *Pseudopanax anomalus).* The other site is on my property. Here the vegetation is 60-year-old regenerating kauri, kahikatea, totara and tanekaha as canopy, with an understory of *Alseuosmia banksii*, hangehange and mingimingi. This site is a damp shady sheltered spot in a gully about 3 m from a creek. I only recently observed this population as I always thought the plant to be mingimingi, but one day I saw the characteristic seeds by chance and so it was a pleasant surprise to be able to confirm its identity.

An interesting feature of these two populations is that they form a colony rather than being single isolated plants. There is below ground a horizontal lateral root from which separate plants seem to arise.

Both these populations are dioecious and are flowering vigorously in June 1998. There is no obvious variation in leaf shape between the sexes. I have had little problem germinating *P. pimeleoides* var. *pimeleoides*; it takes about seven months. The seedlings are quite variable with one even looking like the whorled broader and more oval leaves of *P. michiei.*

Both these plants are classed as vulnerable, so their discovery has been rewarding and worthwhile. However the biggest excitement comes with the germination of the seeds of these plants. The future survival of the species is enhanced. Both *Pittosporum* populations are on private land and both land owners, while being very receptive to the conservation of these species in their natural environments, lack the resources to protect the habitats from the ravages of introduced pests and the associated degradation. Domestication in ornamental gardens may be an insurance policy that ultimately protects the existence of these special species.

These finds also reinforce the special place Whangaroa holds as a hot spot of biological diversity.

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# A Mention of Rangitoto's Vegetation in 1855

Rhys Gardner

Dr. William Harvey, eminent Irish botanist and avid collector of marine life, made a long-dreamt-of world tour in the mid-1850s. He crossed from Sydney to reach Auckland on 29 June 1855, and stayed here for a few days before leaving for Tonga and Fiji in the missionary barque *John Wesley.*

Harvey's letters have been made available in unabridged form by Ducker (1988), and in two of these, one to the naturalist George Bennett of Australia and the other to his sister Hannah, he gives us some botanical glimpses of Auckland city: "a fern-valley, behind the town" [1], the noble mamaku tree-fern, "Hobson's glen" [2], St John's College, Mt Eden, Dr Sinclair. He noted that flax was abundant on the hillsides, as was "a Leptospermum, which covers all the hills round Aukland [sic] & was in full bloom", but that "the absence of trees and the wintry sky together give the impression of bleakness".

Perhaps Harvey's most interesting observations are those in the note he made on a visit to Rangitoto on 3 July:

Next day (3rd) Capt D[rury] took me to Rangitoto, a curious volcanic island forming the South head of the harbour [i.e., Hauraki Gulf]. It is a cone about 600 feet high, the upper part grassy, the lower covered with trees and shrubs - The whole surface of the island is cindery, the cinders often of huge size and heaped together in the wildest confusion making walking very difficult except to goats, wherof there are large herds. Capt. D. went after them but could not get within shot while I roamed along the beach collecting scarcely any algae but fields of oysters.

Nichol (1992) mentions other sources for the occurrence of goats on Rangitoto at this time, and of its grassy top.

One looks back to those days with more than nostalgia, when one could botanize on Rangitoto and like Ben Gunn refresh oneself with roast goat and oysters.

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[1] Probably Newton Gully
[2] "I walked two or three miles from town to Hobson's glen - a smaller but better locality to that [the " fern-valley behind the town"] I had seen the day before." This is the valley between Ayr Street and Bassett Road, Newmarket (John Webster pers. comm; see Kinder photos etc.).

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# *Schoenus carsei* revisited*

Rhys Gardner

This species, a tussocky, long-culmed swamp sedge, was founded by Cheeseman on collections from four localities: "Whangarei" (actually,Maungatapere), Papatoetoe, between the Manukau Harbour and the Waikato River, and "Taranaki" (Ngaere Swamp). He conjectured that it might prove to be "common in lowland swamps". Actually, it seems to be one of our rarer plants (it also occurs in Australia). No longer present at Maungatapere (P. J. de Lange pers. comm.), nor, probably, in South Auckland, it does still occur in the Waikato Basin, at least at Whangamarino and Opuatia (C. C. Ogle, P. J. de Lange, pers. comm.). The only recent AK collection from further south though comes from the Hinehopu Swamp at the east end of Lake Rotoiti (Rotorua district), where Ewen Cameron found it to be "locally common ... associated with *Schoenus brevifolius and Tetraria capillaris* ". It is not to be found in what is left of the Ngaere Swamp (C. C. Ogle pers. comm.).

My previous report of a collection of *S. carsei* from Ruawai was wrong, the specimen (AK 229770) on re-examination proving to be of *Baumea tenax.* Another so-labelled recent AK specimen, from a coastal swamp near Tutukaka, is also of *B. tenax.* It seems then that the only collection of S. *carsei* made from north of Auckland in the last 50 or so years might be that which Colin Ogle got from Great Barrier Island in 1980 (CHR 367170,1 km SSW of Claris, grid. ref. NZMS 259: 710704, in manuka*/Gleichenia dicarpa/ Baumea juncea* swamp). The plant should be searched for in the Far North, since Carse found it near Wharekia, Rangaunu Harbour "in morass between the mangrove swamp and ancient coastline" (see also *W. F. Harris,* Kaikino [Stream ?], 1948, CHR), and Cooper, Mason and Moar found it in 1948 in the "swamp in valley near bridge at top of Ahipara Hill (AK 220483).

If one has only sterile specimens, it is still possible (with some luck) to distinguish *Schoenus carsei* from the very similar *Baumea tenax* and *Tetraria capillaris,* using just a razor-blade and x 10 lens (see Fig.1), as follows:

1 Culms at c. ½ way up usually less than 0.8 mm diam., pith finely but distinctly septate; mucro of basal sheaths us. projecting less than 5 mm long beyond sheath apex, minutely setose on the basal margins..... ..... *Tetraria capillaris*

1 Culms at c. ½ way up usually 0.8-1 mm diam., pith continuous (but liable to compress or break down under the blade in *S. carsei);* mucro of basal sheaths glabrous .....2

2 Pith of culms longitudinally traversed by denser (living ?) plates of tissue, in longitudinal section then pale but with one or more darker streaks or lines; mucro rarely exceeding sheath apex by more than two mm ..... .....Baumea *tenax*

2 Pith of culms uniformly pale-parenchymatous; mucro sometimes several cm long .... ... *Schoenus carsei*

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