Pittosporum michiei discovered at Whangaroa

Tony Foster

A recent discovery of *Pittosporum michiei (*syn. *Plttosporum pimeleoides* var. *major* syn. *Pittosporum pimeleoides* subsp. *major)* has been made at Waitaruke on the shore of the inner Whangaroa Harbour. There are about seven groups or colonies of this plant at this coastal cliff site, 1-4 m above the high tide mark (see Fig.1). The sprawling, prostrate nature of the plant's growth habit makes it difficult to count individuals, as the plant tends to form roots where stems touch the ground. Voucher specimen is lodged in Auckland Museum herbarium (AK 234130-32).

Associated plants include pohutukawa, with one *P. michiei* plant growing almost as an epiphyte where the pohutukawa trunk joins the cliff, manuka, manuka, mingimingi, *Pittosporum umbellatum,* hangehange, kohekohe and gorse.

The slightly oval leaves are 1 cm or more wide, 3 cm long, green on the topside and pale green beneath, rounded at the tips and grouped in whorls radiating out from the stem.

The plants are dioecious, with an about equal ratio of sexes. There is a slight difference in leaf size and flower grouping between the sexes. The flower is small about 0.5 cm long with brightly coloured red and yellow petals. The seeds are found in oval capsules about 1 cm long and are black and sticky. Flower buds were beginning to open the first week in June 1998, while in September 1997 there were only a few spent or withered flowers remaining. Seeds are present all year round. Seeds were collected and placed in an unheated glass house and germinated the first week of June, about 9 months from collection. The level of germination was about 95%.

This area of the Whangaroa Harbour has a long and often colourful history. It is known to Ngati kahu o Whaingaroa as Waitangio, and was the place where the chief Hongi Hika spent his last days in 1827 after being shot at Taratara, inland from here. Nearby is Horuata the kainga of Ururoa, a Chief or warrior of the first order. Around the point 300 m is a spring Waipuna where commercial European settlement began in the 1850's, and is now known as Penia. The wreck of the boat *The Boyd,* sacked in 1809 with the loss of 64 lives, lies seaward about 500 m. Commanding a view of the entire foreshore is the hilltop Paa Toirere, a ngati-awa paa, its story lost in pre-history. While this area now is a very quiet backwater, it has at times been heavily inhabited. Perhaps the present day distribution of *P. michiei* at this site could be explained as being due to baggage brought by local Maori returning after a visit to North Cape; it seems odd that such a plant with a previous known distribution of only one population should turn up at a location that was once heavily populated. This theory could be proved wrong if more plants were found elsewhere.

I have shown the plant to a local Kuia who informed me that the plant was known to her and would have been a medicinal or rongoa plant. She can remember picking the leaf as a child accompanying her grandmother. I take her claim in all sincerity as she was able to describe to me the difference between this plant and *Pittosporum cornifolium.* She is very knowledgeable about plants.

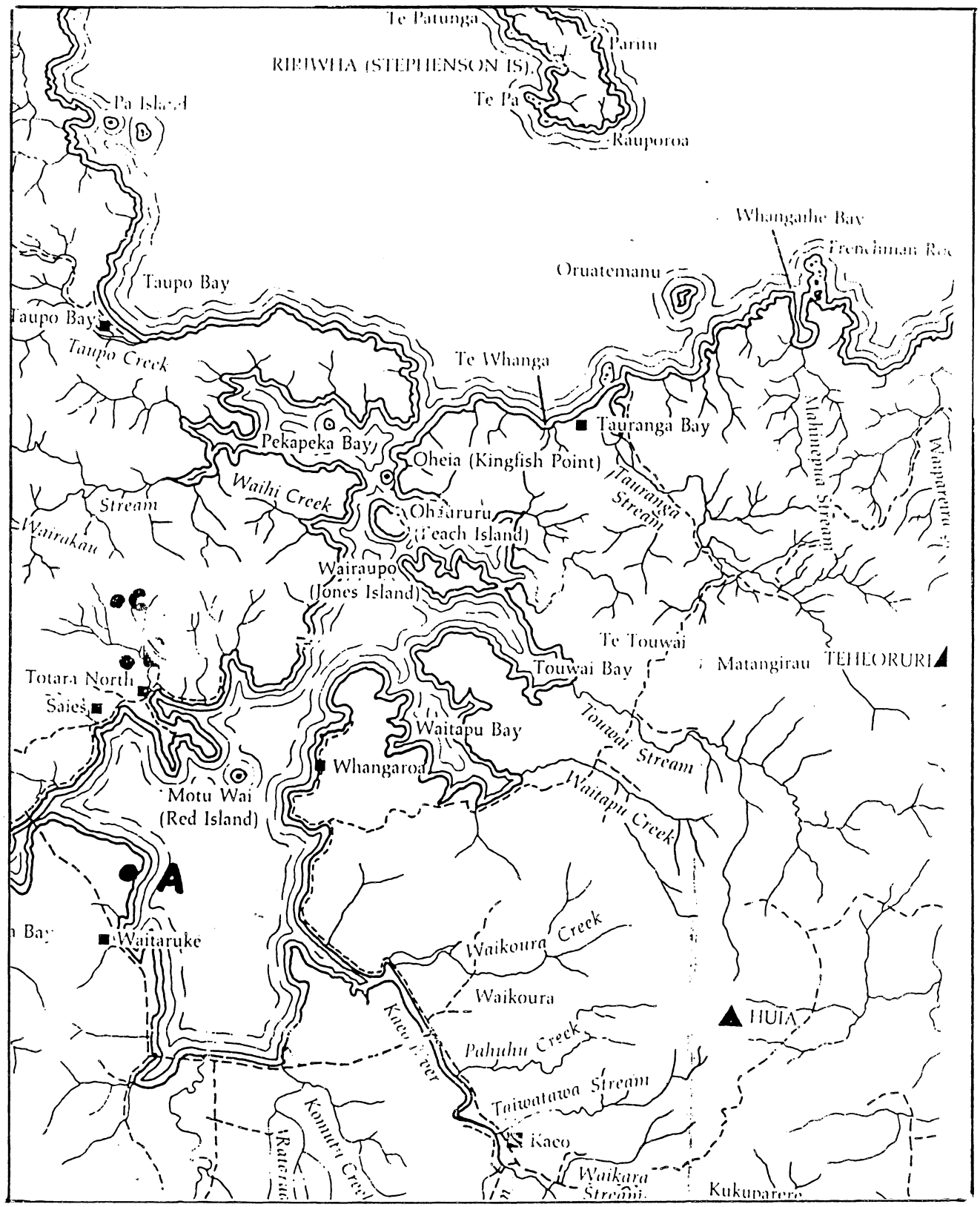
Department of Conservation Kerikeri has been notified of the presence of these plants and is planning a fence to reduce erosion by cattle on the cliff above the plants; their planned introduction of bait stations to kill possums, will also help, as at last visit browsing on one plant was noted.

The *P. michiei* at Waitaruke are not growing on serpentine rock like the population at North Cape, which suggests that the plant is not restricted to this type of substrate. The soil type that *P. michiei* grows in at Waitaruke is Otangaroa sandy clay loam; it is imperfectly to very poorly drained, compared to the North Cape population; this grows in Rangiuru clay, a brown granular clay, strongly to very strongly leached, and well to moderately drained. In the Department of Conservation shade house at Kerikeri there is a male *P. michiel* sourced from North Cape, in good health; it has flowered profusely each June for the past four years, growing in a PB20 bag of a commercial peat-based potting mix. In my garden I have a cutting from the North Cape male that for the last 18 months has grown well, in a poorly-drained clay soil. These observations lead me to the conclusion that *P. michiei* is, like other *Pittosporum*, relatively hardy and survives well over a range of soil types in cultivation.

I note that *P. michiei* is the only plant in Trees and Shrubs of New Zealand by Poole & Adams (Manaaki Whenua Press 1994) for which there exists 2 entries.

Also recently confirmed has been the discovery of two populations of *P. pimeleoides* at Totara North on the western side of Whangaroa Harbour. One site is a ridge at about 270 m above sea level consisting of tanekaha , kauri, mingimingi, mairehau, *Melicytus micranthus, Melicope simplex* and the relatively rare

Fig. 1: Whangaroa Harbour
Pittosporum michiei and P. pimeleoides sites in Whangaroa.



A = site of *P. michiei*. B = site of *P. pimeleoides* (my house).
C = site of *P. pimeleoides*

*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

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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.