MANGERE - A SMALL FOREST REMNANT AND SICYOS AUSTRALIS

E.K. Cameron

On 14 April 1991, while searching by the ARC Mangere Purification Works for native vegetation, I noticed some 200m inland from Oxidation Pond No. 1, north of Ihumatao, a narrow strip of karaka and titoki trees on a steep rocky bank (260 RII 664673 ± 5-10m asl). The general area is of volcanic origin and is grazed pasture. Although some fences are present stock has access to the bush. Only the steep bank (± 6m vertical hight) of rocky blocks affords limited protection to the trees. The bush extends for some 150m and is about 10m wide. The trees are not ancient, reaching about 16m tall and 50cm dbh (one karaka was about 70cm dbh); karaka and titoki seedlings are common between the rocks.

The discovery here of maawhai (*Sicyos australis* - it used to be known in New Zealand as *S. angulata*) is extremely exciting as it has not been collected in the Auckland Isthmus since 1866. (It should be added to Esler's (1991) native plant account of Auckland). At Mangere it was occasional along the upper and lower bush margins, both climbing and spreading over the ground. On 16 June it was in flower and possessed green fruit. Maawhai is in the Cucumber Family and the spreading vine is very similar to a cucumber plant except the fruit is small and spiny with reflexed barbs. In New Zealand it is mainly restricted to northern offshore islands and the Kermadecs. It is also native to eastern Australia, Norfolk and Lord Howe Islands, but is probably extinct now at the two latter island groups (Connor & Edgar 1987). The closest maawhai records to Mangere appear to be historical ones from: Mt Smart, Kirk herbarium, one sheet dated 1866 (WELT 31872-73, 31890); the inner Hauraki Gulf e.g. Otata Island *Matthews* ? Cheeseman herbarium (AK 37063) and Motuihe Island *Kirk* (AK 11701). (This historical Motuihe record could be added to Esler's (1980) account of the island). More recent records are further away e.g. Amodeo Bay, eastern Coromandel Peninsula, *Outred* (AKU 2759) and Little Barrier Island (pers. obs.).

Has maawhai recently arrived here? Cultivation of this species is unlikely (except by eccentric botanists!) because the fruit is so unappealing. It is possible a bird transported the fruit (attaches easily) from a more northern locality. This is unlikely because what bird travels between a remote place like Little Barrier and this small Mangere remnant ? Kaka, tui, black-backed gulls ?? Possible but unlikely. Mangere is, more or less, inside the historical distribution of maawhai and I believe it could have hung on in this general area unnoticed until now.

This regenerating forest is the only natural forest remnant I have managed to find in the general area and the next closest bush is cliff pohutukawa forest at the end of Renton Road, nearly 2 km away (Puketutu Island was not looked at). A full species list of the bush is appended. All the species present are important because various revegetation/restoration projects are presently being discussed for several nearby areas and local seed sources are severely limited. The bush is in private ownership and a high priority must be for it to be fenced. This skinny-shaped bush has a very long edge which will require weed control. Already privet (*Ligustrum sinense*), smilax (*Asparagus asparagoides*), woolley nightshade (*Solanum mauritianum*) and inkweed (*Phytolacca octandra*) are commonly present.

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APPENDIX : Native vascular plant list for Mangere forest remnant

AKU = herbarium voucher
c = common
o = occasional
l = local
xl = only 1 plant seen

Alectryon excelsus titoki	c	
Arthropteris tenella	l	AKU 22894
Asplenium flaccidum s.s.	xl	
Coprosma macrocarpa coastal karamu	o	AKU 22893
Corynocarpus laevigatus karaka	c	
Dodonaea viscosa akeake	xl	
Entelea arborescens whau	o	
Macropiper excelsum kawakawa	c	
Oplismenus imbecillis	l	
Peperomia urvilleana	l	
Phymatosorus diversifolius	l	
Pteris tremula	o	
Pyrrosia eleagnifolia	l	
Sicyos australis maawhai	o	AKU 22895
Vitex lucens puriri	o	

PARATAHI ISLAND - KAREKARE, WEST AUCKLAND

E.K. Cameron

After an earlier abandoned attempt I managed to swim out to the small Paratahi Island on 13 January 1991 when the surf was less than 1m. Paratahi Island is some 250m off the southern end of Karekare Beach, on Auckland's exposed west coast (grid ref. 260 Q11 412665). At low tide the distance between the island and the beach varies as a tongue of sand may build up to within about 50m of the island, as it did last year. Paratahi is about 30m long (north-south axis) by 15m wide and has a high peak about 12m asl at the northern end. The lower western side of the island has a sloping shore platform that fur seals are reported to pull up onto. The higher part of the island and most of the east side is very steep. Paratahi is composed of firm, columnar jointed, grey igneous rock (probably an andesitic dike) (B.W. Hayward pers. comm.). The island appears to be either Crown or Maori owned.

FLORA

The upper part of the island is well clothed in low vegetation, almost reaching the sea on the east side, but only a few metres down from the summit on the exposed west side. Taupata is commonly growing in the larger cracks running up the island and gives the island's east side a smooth exterior cover. In places under the taupata there is a very shallow organic layer. Four vascular plant species were recorded:

* N.Z. ice plant (*Disphyma australe*) - occasional to common as dense mats
* taupata (*Coprosma repens*) - prostrate and common, many plants covered with green fruit
* shore groundsel (*Senecio lautus*) - occasional to common as dried up plants, mainly on the east side
* N.Z. spinach (*Tetragonia trigyna*) - a single fruiting plant amongst taupata.

There were occasional smallish plants of the large brown algae, *Durvillea antarctica*, present by the low water level.

Surprising absentees were *Einadia trigonos* and glasswort (*Sarcocornia quinqueflora*), the former was present on the barer Oaia Island, which is located 17.5 kms further up this coast (cf. Cameron & Taylor 1989). Note - the Oaia Island *Einadia* species (AKU 20967) was wrongly identified as *E. allanii*, it is actually *E. trigonos*.