NATIVE BUSH AT SYLVAN PARK, NORTH SHORE, AUCKLAND

R.O. Gardner

INTRODUCTION

This recreation reserve on the northern side of Lake Pupuke has several fine stands of mature native broadleaved trees, principally karaka and kohekohe with some puriri, taraire, kowhai and other species. The taraire (35-50 cm dbh) and the single tawa (40 cm dbh) yield ring counts of approximately 100-150 years, so an assertion of mine (Gardner 1981) that the only forest remnant on the North Shore dominated by "pre-European" trees is Smith's Bush (also on the Lake Pupuke tuff ring, 2 km to the south-west) is wrong at least in spirit.

Elsewhere round the lake there are rather few native trees. An 1863 plan (reproduced in Sayers and Dumbleton 1973 p.54) shows bush mostly confined to the lake edge but rising to the tuff ring crest in the north (Sylvan Park) and opposite on the southern shore at what is today another reserve, Killarney Park. The latter area and nearby house sections have some large pohutukawa at the shore but of the other trees scattered upslope — kohekohe, kowhai, puriri, matai, totara, cabbage trees and kanuka — only the kanuka are of good size for the species.

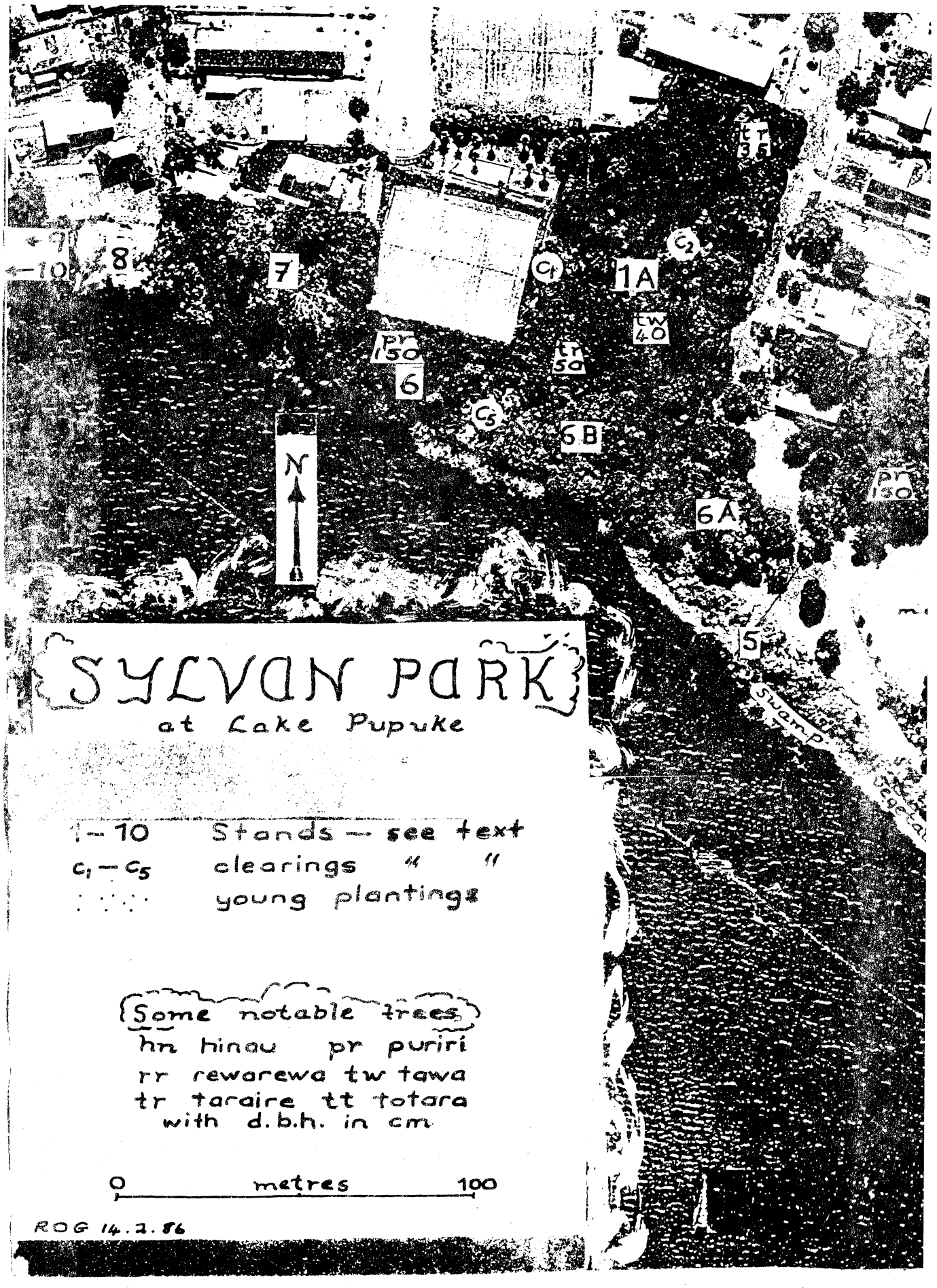
On the eastern side of the lake the old native trees are mostly pohutukawa. On the west side between the two Parks in the North Shore Hospital grounds there is a group of 40-50 cm dbh kahikatea, ngaio and kohekohe. There also is a single large karaka in the line of an old hedge on the outer slope of the tuff ring towards the motorway and Smith's Bush. Of approximately this area Titchener (1976) writes: "Although some hawthorn hedges were planted — and in the Taharoto Rd area can still be seen — the most fences were post and rail cut from puriri trees which grew in a belt around the present Smith's Bush."

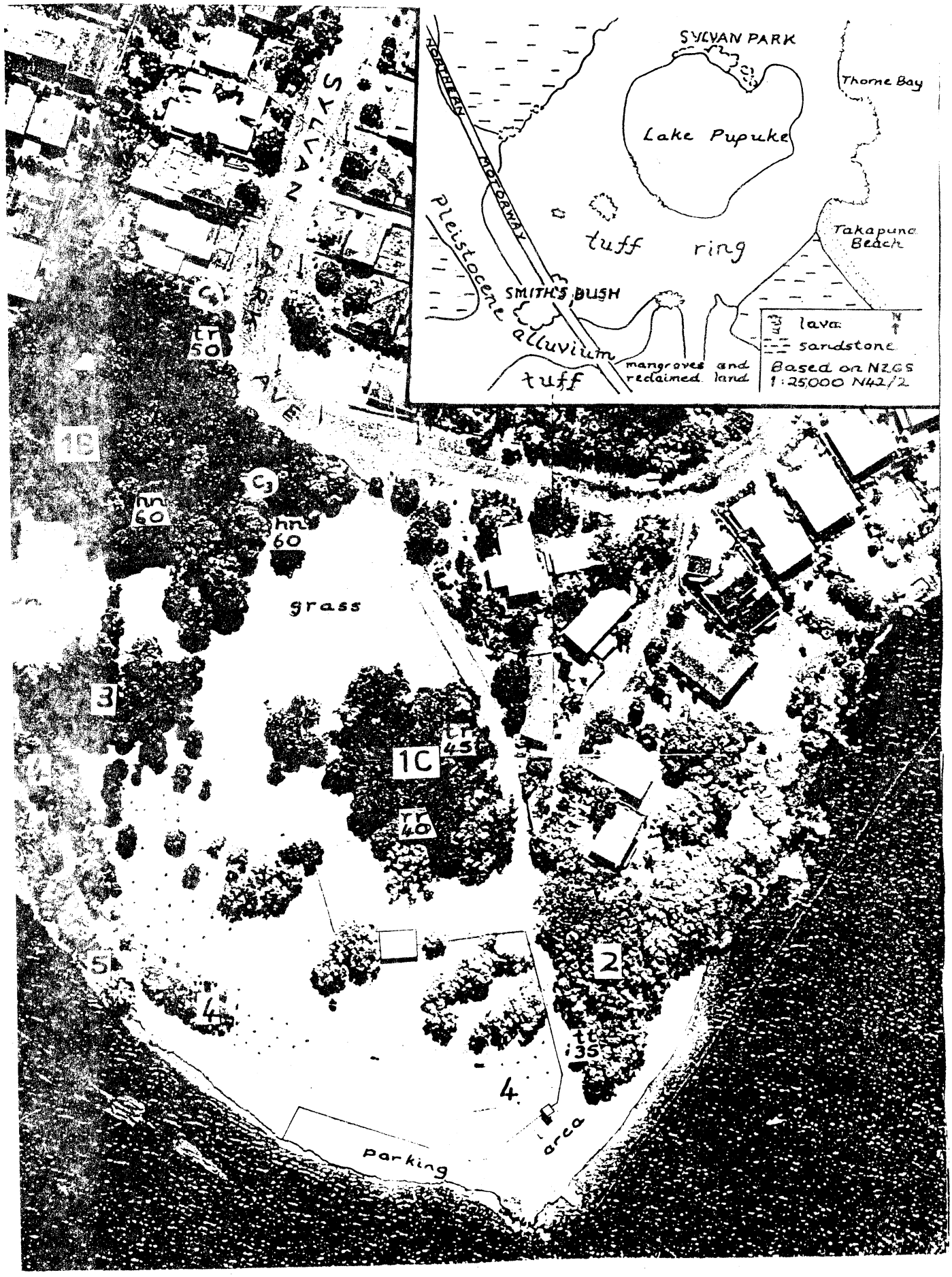
VEGETATION

The areas described below, with the exception of two beyond the westward extremity, are shown on the accompanying figure "Sylvan Park". Not all of this ground is reserve.

1A, 1B, 1C Closed-canopy broadleaved forest on gentle slope of weathered tuff and basalt; dominated by 9-13 m tall 20-40 cm dbh karaka and kohekohe with a few puriri, kowhai, taraire, rewarewa, pohutukawa, hinau tawa. Several pigeonwood, mahoe and Coprosma macrocarpa reach high into the canopy, otherwise the understorey and lower layers are absent except in 1A where there is C. macrocarpa, Pseudopanax lessonii, kawakawa, karaka saplings and the exotics spindle and eleagnus, all less than c. 3 m tall. Trampling and cutting might have caused this deficiency but the lack of Geniostoma ligustrifolium and young kohekohe even in 1A suggests that dryness could also be influential.

The ground cover is nearly all wandering jew, stinking iris, onion grass or periwinkle, with patches of Oplismenus imbecillus, Carex solandri and C. lambertiana. Seedlings of Coprosma macrocarpa, kawakawa and karaka are frequent but only on the margins are there larger


SYLVAN PARK
at Lake Pupuke
1–10 Stands — see text
c1 – c5 clearings " "
young plantings
Some notable trees
hn hinau pr puriri
rr rewarewa tw tawa
tr taraire tt totara
with d.b.h. in cm
0 metres 100
ROG 14.2.86
N
8
7
1A
6
6B
6A
5
C1
C2
C5
tr 35
tw 40
tr 50
pr 150
pr 150
Swamp


SYLVAN PARK
Thorne Bay
Lake Pupuke
NORTHERN MOTORWAY
Pleistocene alluvium
tuff ring
Takapuna Beach
SMITH'S BUSH
tuff
mangroves and reclaimed land
lava
sandstone
Based on NZGS 1:25000 N42/2
SYLVAN AVE
grass
Parking area
1B
1C
2
3
4
5
C3
hn 60
tr 50
tr 45
tr 40
tr 35

individuals. Lianes are absent and except for Pyrrosia serpens, which is common on higher branches, the only epiphytes are a few clumps of Collospermum hastatum on several puriri and kohekohe.

The 1863 plan shows the upper edge of the bush here more or less in its present position (i.e. northern edges of 1A and 1B). Outside the Park today higher on the slope in house sections there are some pohutukawa, kowhai, puriri, rewarewa, cabbage trees and karaka none of great size.

1A As noted above, native species now dominate the shrub layer but eleagnus, spindle and Chusan palm (Trachycarpus fortunei) are increasing.

C_1 clearing with young planted "natives".

C_2 clearing with 4-6 m tall cabbage trees and Coprosma macrocarpa self-sown into felling gap; also planted kauri and podocarp saplings.

1B Has several huge puriri, but most karaka and kohekohe are of poorer form and lesser stature than those of 1A, especially towards the lower edge, perhaps indicating that the exposed conditions here have prevailed for some time. Many of the smaller kohekohe and some large ones have scrappy tops.

To the east in the house section at the top of the drive into the Park a 10 m tall kahikatea stands among several young nikau. Aerial photographs show forest here until about twenty years ago, so nikau has been included in the species list despite no other plants, not even seedlings, being found.

C_3 clearing after decline and recent death of several kohekohe; now ringed on south side by 4 m tall 10 cm dbh Coprosma macrocarpa, the only shrubs in this stand.

C_4 clearing of mown grass, "natives", mountain pawpaw, banana, garden plants.

1C Has four emergent rewarewa 25-40 cm dbh, and a very large karaka (75 cm dbh but hollow-trunked like probably all the old karaka in the Park).

2 Slope down to bench of fill (parking area) just above lake level. Mostly of 14 m tall multistemmed pohutukawa. There are three totara here the largest of which (35 cm dbh) is c. 70 years old. The understorey is of 5-8 m tall youngish kohekohe, karaka and mahoe, above Coprosma macrocarpa, kawakawa and juvenile karaka. Seedlings of karaka are in moderate number; those of kohekohe, taraire and totara are infrequent.

There are a dozen or so large exotic trees in the lower corner here and in the adjacent house sections. A 40 cm dbh oak in the middle of this stand, now a canopy tree, might be a planting too.

3 Level ground with scattered 5-9 m tall open-grown kowhai and what would seem to be an older generation of trees here, sturdy 5-10 m tall 20-40 cm dbh karaka and kohekohe.

A rotten-centred piece of kowwhai trunk 40 cm in diameter, being used as barbecue fuel nearby, came from the tree that grew at the north-eastern corner of this area. It had c. 70 rings. Similar-sized

kowhai grow on the margins of stands 1A, 1B and 1C and a few within; they are perhaps all of this surprisingly young age.

The karaka and kohekohe have old storm damage to their upper trunks, a feature also of the adjacent edge of stand 1B.

4 Slope down to lake. The eastern part of this ground has been benched by bulldozer. Westwards, the 100 m of short steep slope has some old trees (several moribund kowhai the largest 50 cm dbh, karaka and one 25 cm dbh Litsea calicaris) growing among a "native" planting of 4 m tall ngaio, Griselinia littoralis, Pittosporum crassifolium, Melicope ternata, Hoheria populnea, totara, flax &c. This planting is being overtaken by self-sown cabbage trees, Coprosma macrocarpa, privet (Ligustrum sinense) and some Coprosma robusta.

"Natives" continue to be planted here and on the edge of 3; some may survive to obscure the views.

5 Except for a very short piece of low cliff, which has two old kowhai, the lake edge is of flat wet ground (after bulldozing?) and is dominated by 9 m tall crack willow with Coprosma spp., mahoe, privet, eleagnus, honeysuckle, flax (planted?), ginger, pampas grass , bamboo and swampy patches. There are young cabbage trees but none of the older ones that might have been expected on an old shore-line. This is apparently because the lake level used to be much lower, water being taken to supply the North Shore until about 1940. In the 1950s the level rose to approximately its modern position, which to judge by the presence of old native trees at the water's edge west in stand 6 cannot be much below the original nineteeth century level.

Some swampy ground of sedges and raupo lies to the lake side; it was not investigated.

6 Steep slope to lake, mostly clay with some basalt outcrops. The least-disturbed places have 10 m tall karaka and kohekohe with a few large puriri, kowhai and pohutukawa. Coprosma macrocarpa, mahoe and karaka poles form a sparse understorey over smaller individuals of these species, kawakawa and kohekohe saplings. Doodia media, Adiantum hispidulum and Carex spinirostris occur here and there. Some of the outcrops have Peperomia urvilleana and Arthropteris tenella. There are some old hawthorn about the upslope margin among much Coprosma macrocarpa.

6A This area has been influenced by several large Cupressus macrocarpa and pines which grew near the break of slope up onto 1A. These were felled some time before 1972. Among the several old karaka, kowhai and puriri here there is a young scrub of 5-7 m tall Coprosma macrocarpa, privet, mahoe and cabbage trees over sapling karaka and kohekohe.

6B In the canopy here with karaka, kohekohe and pohutukawa are several very large (6-10 m tall 10-30 cm dbh) Pseudopanax lessonii, Geniostoma and sapling Coprosma macrocarpa, P. lessonii, karaka and kohekohe make up the lower layers, but eleagnus, spindle, ginger spp. and Chusan palm are becoming common. On the ground Carex spinirostis is abundant.

C_5 clearing around Cupressus stump, with a few 2-3 m tall unhealthy Coprosma macrocarpa over buffalo grass, kikuyu grass, onion grass

and pampas. There is one 6 m tall Ligustrum lucidum at the bottom of the clearing, a species not otherwise noted.

7 A Sequoia sempervirens shelter-belt (two individuals in the west recently cut, now sprouting) and three large eucalypts (two felled) enclose here a waste of Watsonia bulbillifera, Oxalis incarnata, ladder fern, cinerea, various planted garden shrubs and cut but sprouting privet and Coprosma macrocarpa. If this is reserve land it would provide a good site to test the capacity of the latter species to regenerate a native cover.

8 Recently-felled native bush on slope between house and lake. Only the kowhai were spared, but they probably will not long tolerate the gardening around their roots. The western half of this section is still under karaka, kohekohe and kowhai.

9, 10 (Not shown on figure). Flame trees, weeds, garden rubbish and a Cupressus macrocarpa grow on the slope at the road end here, then for a short way there is bush degenerating towards its western end into privet-Coprosma macrocarpa scrub with much eleagnus, ladder fern and tecoma. A group of 10 m tall titoki, kahikatea, totara, kauri and kanuka seems to be an old planting about a section of path -- none of these trees are regenerating here.

NATIVE FLORA

This list does not include wetland species, "native" plantings, or entries in the seed "rain" from nearby gardens, e.g., lacebark (Hoheria populnea) and Pittosporum crassifolium.

Ferns

Adiantum hispidulum
Arthropteris tenella
Cyathea dealbata
C. medullaris
Doodia media
Pellaea rotundifolia
Polystichum richardii
Pteris tremula
Pyrrosia serpens

Gymnosperms

Podocarpus dacrydioides
P. totara

Dicot trees & shrubs

Beilschiedia tarairi
B. tawa
Coprosma macrocarpa
C. robusta
Corynocarpus laevigatus
Dysoxylum spectabile
Elaeocarpus dentatus
Geniostoma ligustrifolium
Hedycarya arborea
Knightia excelsa
Litsea calicaris
Macropiper excelsum
Melicytus ramiflorus
Metrosideros excelsa
Myrsine australis
Pseudopanax lessonii
Sophora microphylla
Vitex lucens

Dicot herbs

Haloragis erecta
Peperomia urvilleana

Lianes
Muehlenbeckia complexa
Parsonsia sp.

Monocots
Carex flagellifera
C. lambertiana
C. solandri
C. spinirostris
Collospermum hastatum
Cordyline australis
Oplismenus imbecillus
Rhopalostylis sapida
Uncinia uncinata

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FRUITLESS KARAKA

Lucy B. Moore

In an old garden in Warkworth a karaka tree grows in a shrubbery. It is probably 20 to 40 years old and it may have been planted or perhaps it came with the birds, as taraire, nikau, pigeonwood, &c. come now. Leafy branches clothe the whole tree from ground level to its tip at 7 metres or so. It flowers quite freely, at least round about eye height but there is no record of its ever having set fruit — certainly not in the last seven years when I have lived beside it.

Flowers seem to be perfectly formed, with androecium and gynoecium both well developed, an observation confirmed by Dr Eric Godley who also reported that staining showed that pollen is 99% good. I have not noted any other karaka tree close by but in spring of 1984 I brought flowering branches from a fruiting tree in a small grove some 2 km distant. Several panicles were roughly brushed together and the imported ones, in jars of water, were hung nearby. On the "pollinated" panicles a few ovaries swelled but none grew to as much as a centimetre long.

Some karaka trees produce fruit regularly and usually in quantity but are there others that never do? Dr Godley writes of "a single and isolated karaka outside the Otago Museum which regularly produces good fruit and seedlings".

Botanical Society members might like to enlist as Karaka Watchers, especially in those suburbs of Auckland where these trees have been used for street planting.

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