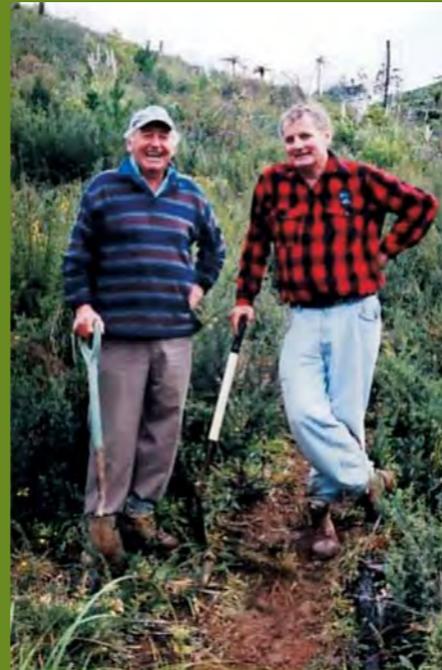


WHAT A KAURI ON!

Mk 2.

A KAURI PHOTO SURVEY OF THE COROMANDEL



MAX JOHNSTON
PENINSULA ENVIRONMENTAL PRACTICE
31-3-2002

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Special thanks for field assistance
over latter years to
Jock Spinks of Maratoto Valley

Copyright

Cautionary Note: The compiler takes no responsibility for track locations referred to in this review of large kauri trees on the Coromandel Peninsula as undoubtedly many tracks will have disappeared through lack of use or maintenance over the years.

Also some trees may have succumbed to the elements or age & fallen.

Precise grid references for tree locations cannot be guaranteed & appropriate planning is recommended to people wanting to visit the more isolated trees in particular.

Sale profits (of the book, not the trees!) dedicated to Kauri 2000 Charitable Trust.

WHAT A KAURI ON MK2!

A KAURI SURVEY OF THE COROMANDELS

From the earliest records of New Zealand's exploration the timber qualities of kauri were well appreciated. Following isolated trees being taken for replacement ship masts the British Admiralty despatched convict ships, returning from Australia, to New Zealand to pick up a load of spars. Thus the first export load of timber left New Zealand in November 1820 on the HMS Dromedary with a load of 98 kauri spars. This signified the beginning of a long era of kauri cutting and export which assisted in forming a sound economic base for the development of the nation.

For over a century kauri was the only indigenous timber to be exploited on a large scale. Until the beginning of the 20th Century kauri was milled at an estimated rate of over 236,000 cubic metres per annum. Since the turn of the Century the kauri timber industry declined to an average rate of 3000 cubic metres per annum during the 1950's.

This rate of exploitation coupled with land clearance and development policies at the time, resulted in a dramatic reduction in the area of mature kauri forests. During the late 1950's and the early 1960's the supply of logs almost ceased from private land, placing even greater demands on the remaining State kauri forests.

Government policy changed over the years to respond to the dwindling resource and to increasing demands for conservation. The New Kauri Policy, created by the then N.Z. Forest Service, the Government Department on whose land the bulk of the remaining kauri was sited, was endorsed by Government on 26th February 1973.

The object of management of this policy, developed in response to a specific need to protect and conserve kauri as a species, was to perpetuate kauri as a species, both in natural stands (whether healthy or not), and as managed stands.

The Kauri 2000 Project on the Coromandel Peninsula is implementing a positive community based extension to the well intentioned 1973 Kauri Policy of a past Government by marking the start of a new Millennium through, as quoted from the Project Outline of March 1999, "taking the first steps towards a future when groves of these beautiful trees will once again dominate the forest canopy – with the potential to endure into the Fourth Millennium."

M J Johnston JR 2002

Current Kauri Stocks on Coromandel Peninsula:

1. Manaia Sanctuary:

410 mainly overmature trees over 250 acres or 101 hectares
Average bole height = 40 ft or 12.2 metres
Average girth = 16 ft 4 ins or 4.98 metres
Average volume = 720 ft³ or 20.4 metres cubed
Total volume = 295,000 ft³ or 8360 metres cubed

In the heyday of kauri logging an estimated 236,000 cubic metres/annum was milled. This equals a volume equating to 28 Manaia Sanctuaries/annum over 2,800 hectares.

2. Waiau Falls Scenic Reserve:

Located on the 309 road and has several dozen large mature kauri trees unassessed for volume.

3. Waiomu Valley:

200 + trees with an estimated average volume of 350 ft³ or 10 metres cubed giving an estimated total volume of 70,000 ft³ or 2000 metres cubed.

The stand is in excellent condition with very good crowns and some light bleed marks (v pattern) completely healed over.

The girth of the largest tree was 24 ft 8 ins or 7.518 metres in 1970 and remeasured out at 25 ft 3 ins or 7.696 metres in 1993. So over 23 years the girth increased by 7 ins or in diameter terms by 2.2 ins or 5.3 centimetres.

4. 3rd Branch Tairua River:

300 + dying and decaying overmature trees with an estimated average tree volume of 500 ft³ or 14.1 metres cubed giving an estimated total volume of 150,000 ft³ or 4,200 metres cubed.

5. Coromandel Range Flanks & Hinterland:

There is a scattering of mature kauri trees on the Range flanks and hinterland outside of the aforementioned areas guesstimated at 500+ in number.

There are also quite substantial areas of seedlings, saplings and poles principally in the Kennedy Bay, Otama and Whenuakite areas with scatterings elsewhere.

**CURRENT LARGE KAURI RANKINGS
COROMANDEL PENINSULA**

Rank	Name	Locality	Girth (m)	Clean Bole (m)	Merch Bole (m)	Merch Vol Cu. Metres	Date Measured
1	Tanenui	Manaia Sanc	10.97	15.85	18.30	135.6	13-5-76
2	Tairua 1	3 rd Branch	9.78	19.20	22.86	128.3	5-7-79
3	Te Hue	Maratoto Villy	11.02	9.75	20.00	115.4	22-2-94
4	Otamatakite	Pulham Stm	10.54	7.80	13.82	110.5	1976
5	Rua Mano	Puriri S/R	9.65	15.50	15.50	109.4	16-12-98
6	Mclsaacs	Mc Isaac's St.	11.28	11.40	11.40	106.7	1972
7	Te Wainora	Kauaeranga Villy	9.80	11.00	22.00	106.1	1-3-96
8	Te Waipaheke	Maratoto Villy	10.35	11.25	18.50	104.6	10-1-95
9	Devcich	Kopu-Hikuai	10.54	12.55	12.55	101.6	1976
10	Opitonui	Whangapoua	10.20	10.75	17.15	100.7	7-1-97
11	Te Waiwawa	Waiwawa C	10.00	11.75	16.75	99.2	1-3-96
12	No. 93	Manaia Sanc.	9.32	15.85	15.85	96.9	22-10-70
13	Waitawheta 1	Katikati Blk	9.40	13.61	13.61	96.5	1980
14	Waitawheta 2	Katikati Blk	9.25	12.29	12.29	83.7	1980
15	No. 77	Manaia Sanc	8.53	16.46	16.46	83.3	21-10-70
16	No. 251	Manaia Sanc	12.09	8.50	14.00	82.4	3-11-70
17	No. 139	Manaia Sanc	7.44	21.34	21.34	77.4	23-10-70
18	No. 112	Manaia Sanc	9.30	14.63	14.63	72.2	22-10-70
19	No. 268	Manaia Sanc	8.84	12.80	12.80	69.9	3-11-70
20	Pakirarahi	Neavesville	8.00	13.50	19.50	69.8	16-12-98
21	Square Kauri	Tapu Hill	8.76	12.80	12.80	69.8	1975
22	Kakatarahae	Manaia Sanc	8.48	12.19	21.34	69.2	22-10-70
23	No. 313	Manaia Sanc	7.47	18.30	18.30	68.5	4-11-70
24	Te Ongohi	Ongohi V	9.77	7.00	7.00	66.7	6-5-97
25	Te Hiki	Maratoto V	7.05	18.00	18.00	59.5	10-1-95
26	Ongohi 2	Ongohi V	6.85	18.00	18.00	56.3	6-5-97
27	No. 288	Manaia Sanc	9.98	7.32	7.32	56.3	4-11-70
28	Waiomu No. 1	Waiomu V	7.70	13.00	13.00	53.0	19-11-93
29	Hamon	Finlayson Stm	12.45	4.67	4.67	39.7	31-12-70
30	McCabe	Wharekawa R	6.37	13.00	13.00	35.4	1981
31	Thwaites	Kennedy Bay	7.85	4.20	9.20	31.3	26-1-02

The above rankings are based on merchantable volumes through application of N.Z. Forest Service timber cruising/assessment methodology.

Girths Breast Height outside bark @ 1.37 metres above stump height were converted to Centre Girth Inside Bark through the use of special kauri taper table and a bark allowance deduction. Bole Height measurements were taken by instrument. Defect and bole abnormalities were allowed for and the result is a cylindrical volume based on merchantability in cubic metres.

All trees were measured in exactly the same way so that ranking, based on comparative merchantable volumes, is as accurate as possible.

Internal defect assessment can be difficult, and as cases in point, there is a strong likelihood that the Tairua tree at No. 2 ranking plus Mc Isaacs tree at No. 6, may have internal decay degrees which could downgrade them off the ranking list.

A large dying kauri in the Puriri Valley measured out at 12.75 m girth, which is the largest girth outside bark on the Peninsula, with a 9 metre bole height to gross 108.074 cubic metres which would have ranked it at No.6 on the Peninsula however, the reality was that a conservative estimate put the sound timber volume at 30 cubic metres and therefore off the current list of 30 trees.

The remains of a large fallen kauri tree was recently measured in the Neavesville area (8-1-99) and this tree would have yielded 181 cubic metres when standing and before decay set in. It would have been larger than current No.1 Tanenui by approx 46 cubic metres.

Note: By comparison with these large kauri, the merchantable volume of an average stand grown P. radiata pine in New Zealand is about 2.83 cubic metres. A very large P. radiata can produce about 5.66 cubic metres.



*Phil's Kauri (No. 288) Manaia Sanctuary Nov. 1970
56.3 cu. metres*

HAMON KAURI

Located in the Kaimarama Catchment @ Grid Reference N44 077 537

Travel up Kaimarama Road for 3.5 kilometres until reaching an old snig track heading south. Follow this for some 3.2 kms to the Flora Stream Rocky Face. Thence along Finlaysons Stream for approx. 2.5 kms to the tree which is sited on a small spur above the creek.

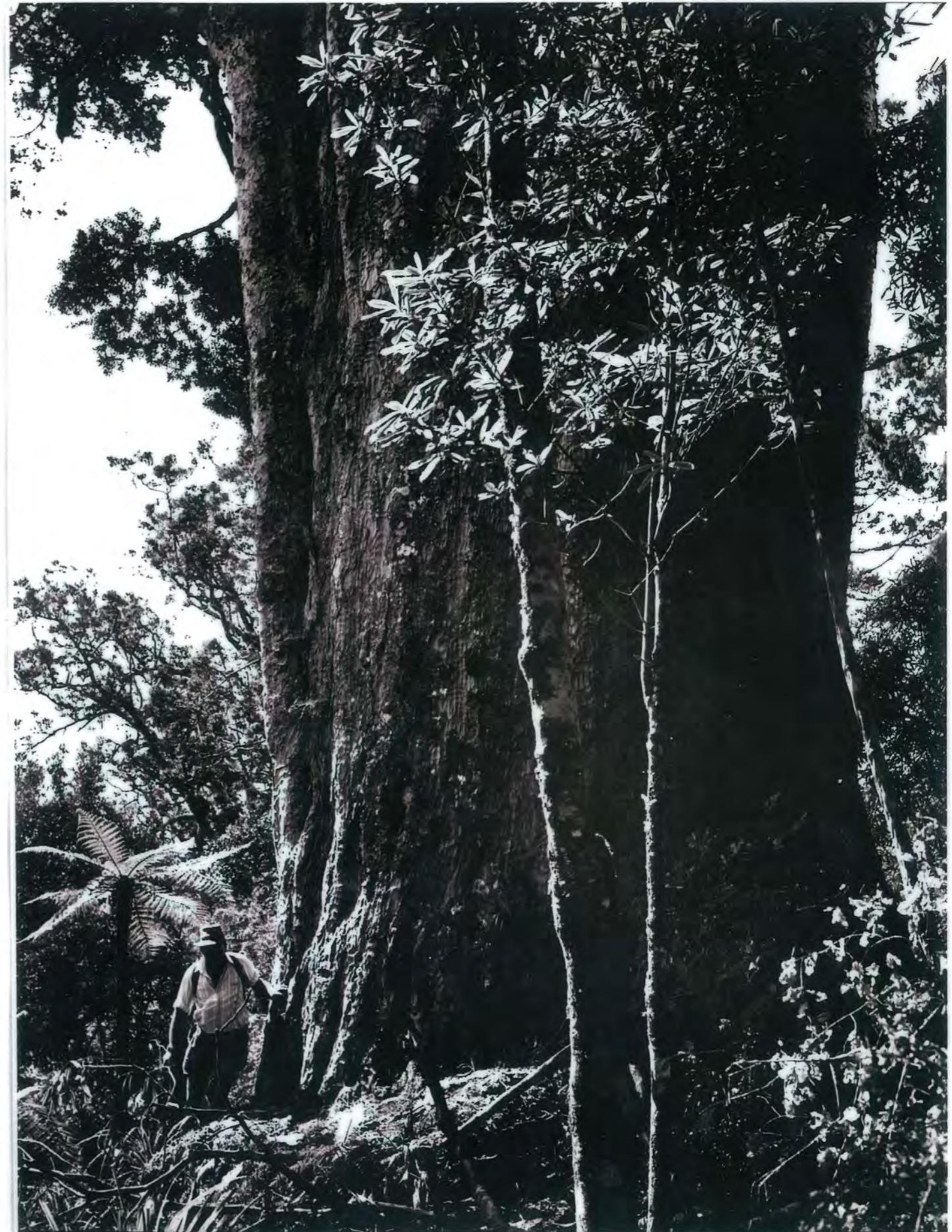
Measurements:

Girth @ 1.37 metres above ground	10.62 metres
Clean Bole Height	4.67 metres
Total Height	27.43 metres
Merchantable Volume	39.7 cubic metres

Tree measured by Max Johnston on 31-12-70
Photograph taken by Olaf Peterson (N.Z. Herald) in 1971
Neville Evans of Colville in photo



Hochstetter's frog *Leiopelma hochstetterii* is a fully protected species. The eggs are laid in damp conditions & hatch as tailed froglets. There is no free-living tadpole stage in the life cycle.



PURIRI VALLEY – TOM'S KAURI
(A dying giant)

Located in Puriri Valley Catchment @ Grid Reference T12 489 414

Three to four hours return trip from Hauraki Plains water supply dam off Puriri Valley Road within Coromandel Forest Park.

Measurements:

Girth @ 1.4 metres above ground	12.75 metres
Clean Bole Height	9.00 metres
Merchantable Volume	91.0835 cu. Metres <u>gross</u> , however, substantial internal decay downgrades merchantable volume to approx. 25 cu. metres or thereabouts.

Although obviously in it's death throes it is of interest because it's girth outside bark is the largest measured to date on the Coromandel Peninsula.

Tree measured & photographed 26-1-98
John Cassidy of Thames in photo



Pete's Kauri Manaia Nov. 1970
108.878 cu metres



**FALLEN KAURI GIANT PAKIRARAHI NO.2 BLK
NEAVESVILLE**

No – not a brick wall but a fallen kauri giant in the Neavesville:-

Mike Barlow, Steven Cuff & Jock Spinks & fallen giant.

Girth & length measurements taken by the writer 8-1-99 over the remains indicate that it would have measured out at about 181 cubic metres volume when standing & before decay set in. It would have been the largest kauri tree on the Coromandel Peninsula – ahead of current No. 1 Tanenui by over 46 cubic metres.

Measurements:

Girth: 11 metres or 36 ft 1 inch
Bole Length: 19 metres or 62 ft.
Volume: Approx.181 cubic metres

Original length approx. 4 metres longer – head smashed over gut when tree fell.



Compare with Tanenui above @ 135.6 cu. metres.



WAIOMU NO.1

Located within the Waiomu Valley kauri stand @ approx. Grid Reference T11 379 607.

About 2 hours return trip from the end of the Waiomu Valley Road within the Coromandel Forest Park.

Measurements:

Girth @ 1.4 metres above ground	7.70 metres
Clean Bole Height	18.00 metres
Merchantable Volume	53.012 cu. Metres

Note: The girth was 24 ft 8 ins or 7.518 metres in 1970 and remeasured out at 25 ft 3 ins or 7.696 metres in 1993. So over 23 years the girth increased by just 7 ins or in diameter terms by 2.2 ins or 5.3 cms.

Tree measured and photographed 19-11-93



Waiomu Township & hinterland 2-9-84



TE HIKI OR SPIKED KAURI

(To step up or ascend)

Located in the true right upper catchment of Waipaheke Stream sou sou east of Puketurua Trig, Maratoto Block, Coromandel Forest Park @ Grid Reference T12 578 312.

Approx. 8 hours return trip from Maratoto Valley Road along existing old Waipaheke Track plus bush crashing for several hours. OK for the reasonably fit.

Measurements:

Girth @ 1.4 metres above ground	7.05 metres
Clean Bole Height	18.00 metres
Merchantable Volume	59.567 cu. Metres

Note the spikes inserted for climbing access in the gum extraction days.

Tree measured & photographed 10-1-95
Michael Deane holding bottom spike. Jock Spinks behind tree.



Typical bleed marks Manaia Stand
Nov. 1970



TE ONGOHI

Located in a hanging valley within the Ongohi Catchment, Moehau Blk, Coromandel Forest Park @ Grid Reference S10 234 154.

Approx. 5 to 6 hours return trip via Philip Wards property.

Measurements:

Girth @ 1.4 metres above ground	9.77 metres
Clean Bole Height	7.00 metres
Merchantable Volume	66.77 cu. metres

This tree is an interesting specimen with its triangular snapper back shape and pronounced reverse taper. It gives indications of being a fusion of 3 closely adjoining trees similar to tree 251 within the Manaia Sanctuary.

Tree measured & photographed 6-5-97
Jock Spinks in photo



Heavily bled tree Manaia Stand
Nov. 1970



KAKATARAHAE

Located on spur on south side of Kakatarahae Stream @ Grid Reference T11 363 758.

A full day required to visit the Manaia Sanctuary of 410 trees from the north off the 309 Road summit via private property or via Waikawau Valley Road in the west (Lumsden property). Only for the fit.

Measurements:

Girth @ 1.4 metres above ground	8.48 metres
Clean Bole Height	21.34 metres
Merchantable Volume	69.20 cu. Metres

Photograph taken with Box Brownie camera in 1970.
Tree has been heavily bled.



Old kauri stump on centre
ridge Manaia Stand Nov. 1970
Phil Alley in photo



SQUARE KAURI

Sited about 50 metres off the south side of the Tapu-Coroglen Road at approx. Grid Reference T11 398 644.

Easy walking track to tree.

Currently ranked at No. 21 on the Peninsula.

Measurements:

Girth @ 1.4 metres above ground	8.76 metres
Clean Bole Height	12.80 metres
Merchantable Volume:	69.80 cu. Metres

Measured & photographed in 1975
Syd & Sheree Johnston in photo.



PAKIRARAH

Located on private land (Pakirarahi No. 2 Blk) in Neavesville area @ approx. Grid Reference T12 472 427.

Approx. 3 hrs return trip over steep untracked country off Neavesville Road

Currently ranked at No. 20 on the Peninsula and is the largest kauri on private land to date on the Peninsula.

Measurements:

Girth @ 1.4 metres above ground	8.00 metres
Clean Bole Height	13.50 metres
Merchantable Bole Height	19.50 metres
Merchantable Volume	69.883 cu. Metres (includes 4.14 m ³ of toplog).

Measured & photographed 16-12-98.



WAITAWHETA NO.1

Located in lower Waitawheta River Catchment within the Katikati Blk of the Kaimai Mamaku Forest Park.

Currently ranked at No. 13 on the Coromandel Peninsula list (i.e. stretching it south a bit).

Measurements:

Girth @ 1.4 metres above ground	9.40 metres
Clean Bole Height	13.61 metres
Merchantable Volume	96.50 cu. Metres

Measured & photographed in 1980
John Underwood in photo



TE WAIWAWA

Located on an upper true right sidling of the Waiwawa River approx. 500 metres north of the old Waiwawa hut site 2 approx. Grid Reference T12 453 600.

Approx. 6 hrs return trip along walking track from Wainora Camp Ground. Time includes an hour or so bushcrashing over final section.

O.K. for the reasonably fit.

Currently ranked at No.11 on the Peninsula.

Measurements:

Girth @ 1.4 metres	10 metres
Clean Bole Height	18 metres
Merchantable Volume	99.25 cu. Metres

Measured & photographed 1-3-96
Keith Donald in photo.



Kauri Tree No. 385 – Manaia Stand – Nov. 1970
Don Woodcock & Phil Alley in photo



TE WAIPAHEKE

Sited in the upper true right branch of the Waipaheke Catchment, Maratoto Blk of the Coromandel Forest Park @ approx. Grid Reference T12 572 308.

Approx. 6 hrs return trip from Maratoto Valley Road along Old Waipaheke Track plus bush crashing for an hour or so.

O.K. for the reasonably fit.

Currently ranked at No. 8 on the Coromandels & is the largest kauri in the Waipaheke Catchment.

Measurements:

Girth @ 1.4 metres	10.35 metres
Clean Bole Height	18.50 metres
Merchantable Volume	104.6 cu. Metres

Measured & photographed 10-1-95
Jock Spinks & Michael Deane in photo



Extensive ringbark damage Tree 400
Manaia Stand Nov. 1970.



JOCK SPINKS

MICHAEL DEANE

DEVICICH KAURI

Located between Kopu/Hikuai Highway & Kaitarakihi Mountain @ approx. Grid Reference N49 178 253.

About an hours walk north along Kaitarakihi Mt Track & thence down a steep track to the right for 10 to 15 minutes (sign-posted).

Currently ranked at No. 9 on the Peninsula.

Measurements:

Girth @ 1.4 metres	10.54 metres
Clean Bole Height	12.55 metres
Merchantable Volume	101.60 cu. Metres

Measured & photographed 1976
Phil Alley in photo



Small pole kauri clump with kauri grass groundstorey in Manaia Stand Nov. 1970.



TE WAINORA

Located on a upper Wainora Stream ridge between 2nd & 3rd true left branches at approx. Grid Reference T12 455 571.

Approx. 2 hrs return trip along walking track from Wainora camp ground. Tree is about 30 metres off track.

Currently ranked at No. 7 on the Peninsula.

Measurements:

Girth @ 1.4 metres above ground	8.80 metres
Clean Bole Height	22.00 metres
Merchantable Volume	106.1927 cu. Metres

Measured & photographed 1-3-96
Keith Donald in photo



A typical Coromandel kauri tree
Waiomu Valley Nov. 1993.



Mc ISAACS STREAM KAURI

Located on the true right bank above Mc Isaacs Stream approx. 1 hr 15 minutes walk up the stream from Coromandel Kaimarama (309) Road at about Grid Reference N44 083 576

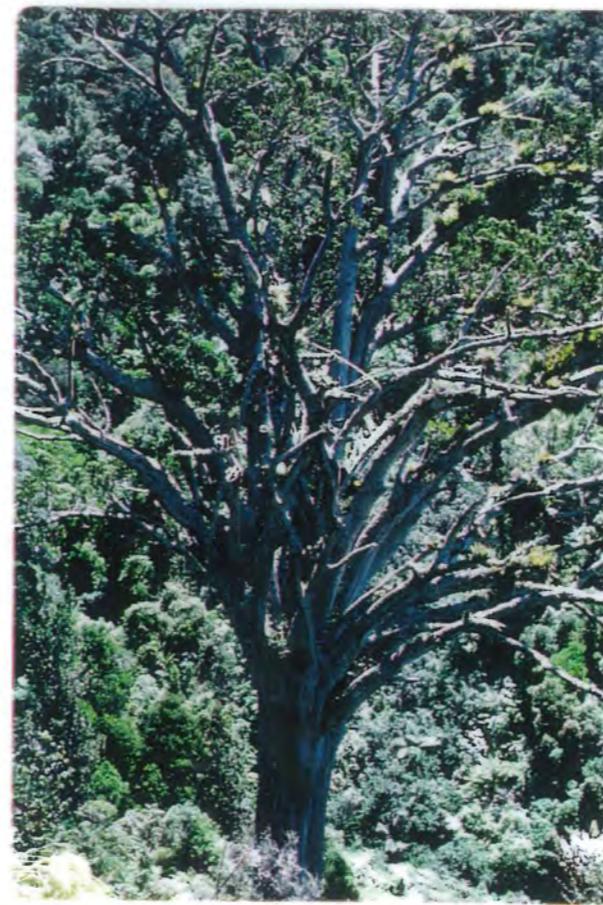
The tree is roughly triangular in shape & only about one fifth of the bark remains on the bole although 75% of the tree appears to be alive.

Currently ranked at No. 6 on the Coromandels.

Measurements:

Girth @ 1.4 metres above ground	11.28 metres
Clean Bole Height	11.40 metres
Merchantable Volume	106.7 cu. Metres

Measured & photographed in 1972 & January 1977



Typical scene in upper Kakatarahae Stream
Manaia Sanctuary Nov. 1980.
Phil Alley in photo.



RUAMANO

Located on lip of centre ridge of upper two Kotorepupuai Stream tributaries at approx. Grid Reference T12 471 429.

Approx. 2½ to 3 hrs return trip off Neavesville Road via true left upper Kotorepupuai Stream tributary to small waterfall – thence north over steep country.

Currently ranked at No. 5 on the Peninsula.

Measurements:

Girth @ 1.4 metres above ground	9.65 metres
Clean Bole Height	15.5 metres
Merchantable Volume	109.445 cu. Metres

Measured & photographed 16-12-98
Jock Spinks in photo.

Kauri bears annual cone crops. The male cones are cylindrical, about 3 cms long, and held in the axils of the leaves on the sides of the branchlets. The female cones, which are held at the ends of short branchlets, are about 6 cms long and have a characteristic globular, slightly flattened shape. It is this shape which has given rise to the scientific name of the kauri genus. *Agathis* is derived from the Greek word meaning “a ball of thread”.

The female cone remains bright green until it becomes fully mature. Cones then disintegrate on the tree over a period of several weeks from early February. When shed from the cone the seed has a single offset wing. This wing causes the seed to flutter as it falls away from the parent tree and descends to the ground. Compared with other indigenous plants kauri seed is large and heavy. It is the only major indigenous conifer tree species to rely entirely on wind as the means of seed dispersal. These two factors restrict distribution. Under normal conditions seed will not travel more than 100 – 150 metres from the parent tree.

Reference: Kauri Forest Management Review, NZ Forest Service 1983.



OTAMAKITE

Sited in the Pulham Stream Catchment in Tairua River headwaters within Coromandel Forest Park.

Grid Reference approx. T12 510 387

A little over an hour's walk each way from the end of the Omahu-Otamakite Road over private land and steep country.

Currently ranked at No. 4 on the Coromandels.

Measurements:

Girth @ 1.4 metres above ground	10.54 metres
Clean Bole Height	7.80 metres
Merchantable Bole Height	13.82 metres
Merchantable Volume	110.5 cu. Metres

Measured & photographed in 1976

John Underwood in photo

In the first few years of growth kauri seedlings have a twiggy, spindly appearance. Seedlings exhibit an interesting range of leaf colour, from bright green to reddish bronze. These colour differences are attributed to the presence of a red pigment, rhodaxanthin. Concentrations of this pigment are 25 times greater in bronzed foliage than they are in green seedlings. Coloration of leaves appears to be related to the degree of exposure of seedlings to direct sunlight and does not seem to have any detrimental effect on seedling growth.

By the time the tree is 25 – 40 years old it is able to produce viable seed. Kauri is able to shed its lower branches by a process of abscission. Sometime after the pole has emerged above the surrounding forest canopy the upward growth of the stem stops. At this stage the lower 10 to 20 m of the trunk is free of branches. The stem continues to grow uniformly along its length, so that by the time the tree has fully adopted the mature form all traces of its earlier tapering bole have disappeared.

Reference: Kauri Forest Management Review, NZ Forest Service 1983.



TE HUE KAURI

Sited in the true right branch of Te Hue Stream Catchment, Coromandel Forest Park, at approx. Grid Reference T12 509 334.

About 2 hours return walk from the Park boundary along an old pack track with some bush crashing near the end. Private property to be crossed in the Te Hue Valley which is accessed via Te Hue Valley Road connecting with the Maratoto Valley Road.

Currently ranked at No. 3 on the Coromandels.

Measurements:

Girth @ 1.4 metres above ground	11.02 metres
Clean Bole Height	9.75 metres
Merchantable Bole Height	20.00 metres
Merchantable Volume	115.483 cu. Metres

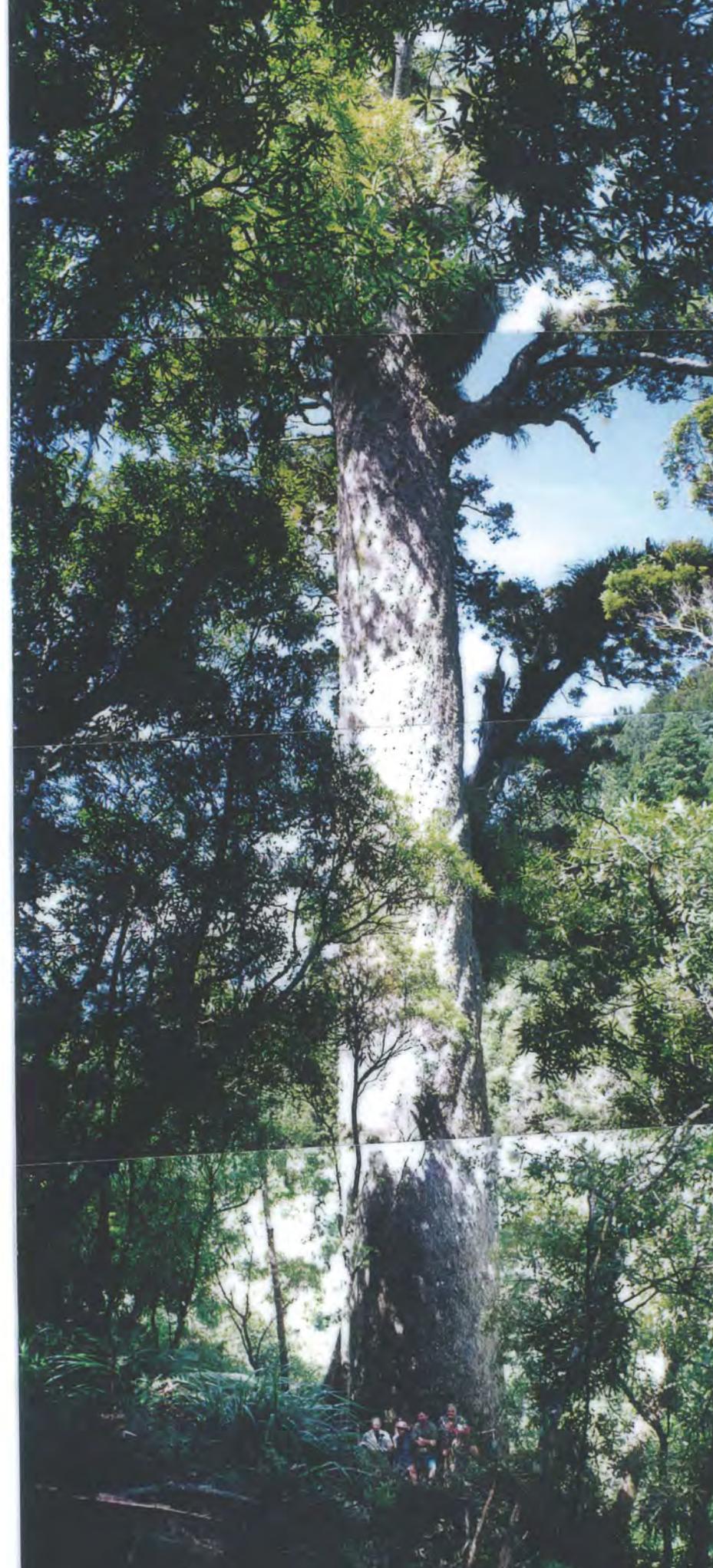
Measured & photographed 22-2-94

People in photo from left to right:

Jock Spinks
Penny Cave
Angus Smith
Alec Spinks
Des Silvester

Studies carried out at Waipoua Forest showed that trees 100 years old ranged from 11 cm to 43 cm diameter; at the other end of the scale 500 year old trees ranged from 94 cm to 218 cm diameter. The maximum rate of diameter growth was attained in the 160th year whereupon the rate fell off rapidly. From these and similar studies the NZ Forest Service had envisaged managing kauri on a much shorter rotation (say 160 years) producing trees of 76 cm diameter, better suited to modern sawmills than the large diameter trees from unmanaged stands. The long rotation and the cost of raising kauri in the nursery led to the termination in 1964 of planting kauri on economic grounds.

Reference: Kauri Management Policy, NZ Forest Service 1980.



TAIRUA 1 KAURI

Located on the ridge between the 3rd Branch & Sisters Stream in the Tairua River headwaters @ approx. Grid Reference N49 196 289.

Access from Puketui Road via the 3rd Branch & then along the dividing ridge which has razorback sections. Return trip takes 6 to 8 hours depending on fitness & agility.

Only for the fit & keen.

David Hoyte & his two brothers sighted three kauri trees in this area in early 1979 & advised the Thame Forest Service office. Ranger Andy Warren & myself measured these trees on 5-7-79. Decay excluded the other two trees.

Currently ranked at No. 2 on the Peninsula.

Measurements:

Girth @ 1.4 metres above ground	9.78 metres
Clean Bole Height	19.20 metres
Merchantable Bole Height	22.86 metres
Merchantable Volume	128.30 cu. Metres

Measured & photographed 5-7-79 (very difficult to obtain a reasonable photograph site – hence not a very good photo). Aerial oblique taken 1-2-73.

Although kauri tends to be restricted to the upper slopes of broken terrain it also inhabits wet undulating plateaus. The degraded soil conditions on these sites coupled with the species' great longevity, requiring a very low rate of replacement and abundant regular seed production, give kauri a competitive advantage over hardwood species on these less favourable sites.

The term 'kauri forest' is somewhat of a misnomer. Kauri can occur as a solitary tree, in small groups, or in large groves in a forest numerically dominated by other tree species. However, the presence of kauri gives the forest a physiognomic distinctiveness. This along with the often astonishing species uniformity of the kauri stand, sets it apart as a unique forest community.

Reference: Kauri Forest Management Review, NZ Forest Service 1983.



TANENUI

Largest kauri tree on the Coromandel Peninsula.

Located on the centre ridge block of the Manaia Sanctuary Kauri Stand @ approx.
Grid Reference T11 372 758.

Access from the end of Waikawau Valley Road, cross private land (Alex Lumsden) to near Puketotara Trig, thence walk east along old snig track/logging access for 4 kilometres, thence further east over trackless steep topography for a further hours walk.

A full day is required for the return trip & is only for the fit.

Access across private land from the north can also be gained.

Measurements:

Girth @ 1.4 metres above ground	10.99 metres
Clean Bole Height	15.85 metres
Merchantable Bole Height	18.28 metres
Merchantable Volume	135.6 cu. Metres

Original measurement 3-11-70 (MJJ)

Remeasured 13-5-76 (MJJ)

Photograph – left b&w – 1971

“ - right 12-2-85 (Peter Carter & 2 others?)



*Manaia Kauri Stand of 410 Trees
Upper Kakatarahae Catchment*



MANAIA KAURI ASSESSMENT – 1970

A 100% assessment of the 101 ha kauri stand was carried out in Oct/Nov. 1970 to ascertain precise volumes, tree stock distribution and general condition of the stand.

Volumes:

The assessment revealed that there are 410 stems averaging 20.4 cubic metres for a total stand volume of 8,364 cubic metres. Other pertinent statistics are viz:

Average height of bole	12.2 metres
Average bole volume	19.7 cubic metres
	20.4 “ “ (including toplogs)
Average G.B.H.O.B.	4.98 metres
Average C.G.I.B.	4.52 “
Volume of healthy kauri	578 cubic metres
Volume of defective kauri	7785 “ “
Volume excluding toplogs	8097 “ “
Total Volume	8364 “ “

Condition of Trees:

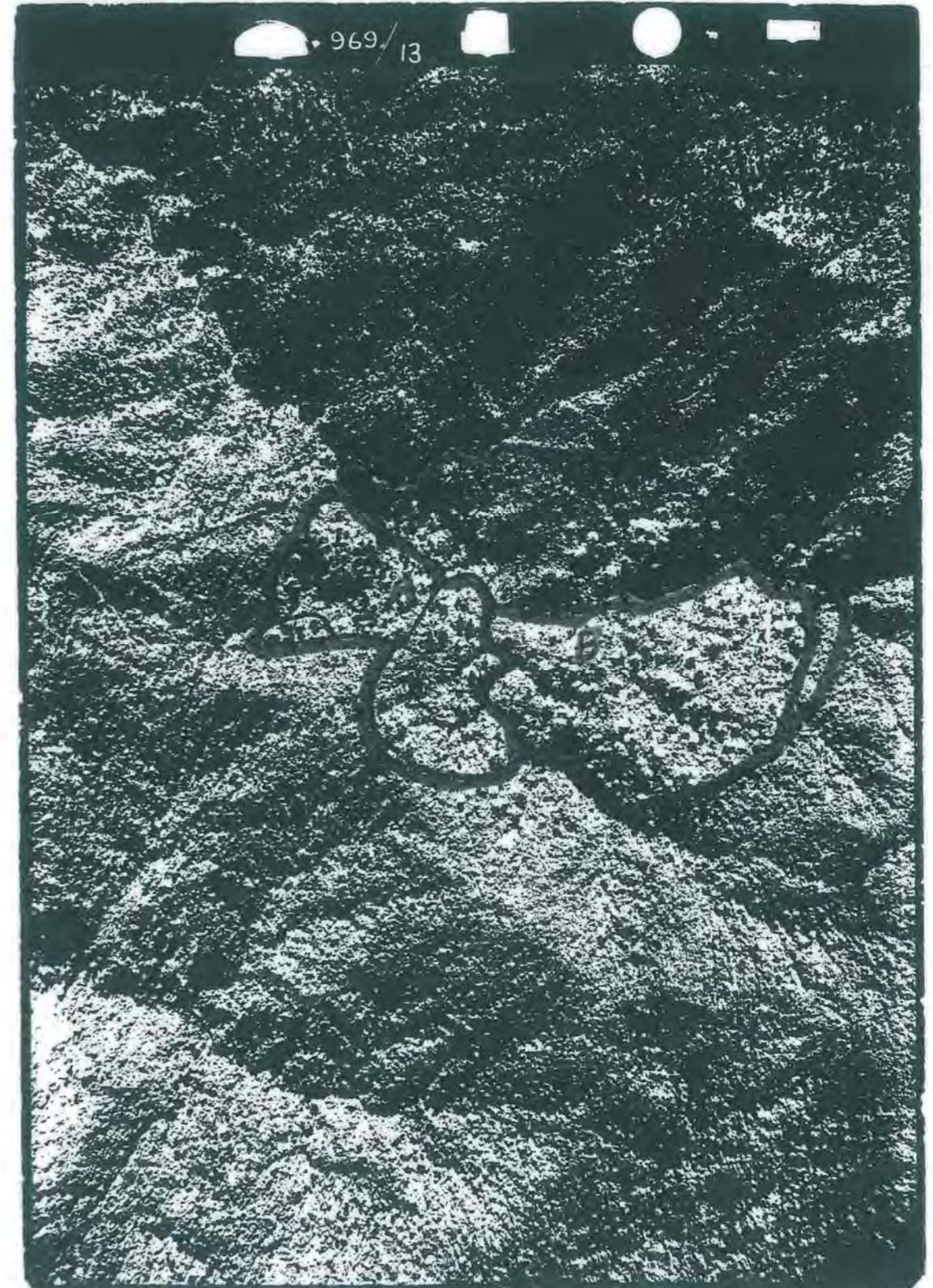
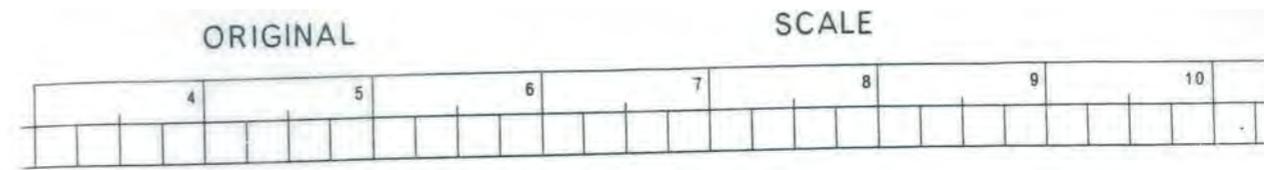
The kauri trees in this stand are mainly large boled and are chiefly mature to overmature. Staghead and dying tops are prevalent with a scattering of dead trees being noticeable.

Bleed marks ranging from light incisions to deep scarf marks are the main single cause of defect in the bole – 278 trees or 68% of the stems have been affected in this way.

Dead standing and down trees account for 34 trees or a further 8% by number.

Deteriorating crowns, a scale study of which is explained in the next separate paragraph brings the total volume of timber containing some kind of defect to 7785 cubic metres as against 578 cubic metres which is classed as defect free or healthy.

The stand contains defect for 81% by stem numbers and 93% by volume.



MANAIA KAURI BLOCK
MEASUREMENT SEQUENCE AREAS A.B.C.

CROWN CLASSIFICATION ASSESSMENT MANAIA KAURI STAND- 1970

As part of assessing the general condition of the Manaia Kauri Stand a comparative crown condition scale was formulated to gain an idea of the various proportions of decadence & die-back in the crown of each tree. A numerical range from 0 to 5 was deemed the simplest way to convey the grade of crown condition.

The photographs perhaps explain the system better, however, the following brief explanation should assist the reader viz:

- D.D Dead down tree
- C.0 Dead standing tree – no foliage
- C.1 One branch still alive
- C.2 Several branches containing light foliage
- C.3 Green crown beginning to dominate over dead portion
- C.4 Green crown dominant – some dead branch ends & dry spikes evident
- C.5 Completely defect free top

In the small pole stand area any degrading of the crown class was generally caused by suppression of part or most of the crown by close adjoining trees. These poles were mostly in the 4 & 5 classes.

The following is the crown condition summary as it applies to the Manaia Stand:

Grade:	D.D	C.0	C.1	C.2	C.3	C.4	C.5	
No. of trees:	21	13	12	17	116	212	19	410
Percentage:	5.2%	3.2%	2.9%	4.1%	28.3%	51.7%	4.6%	100%

For defining between defective/healthy trees a defective tree is classified as having a crown class of 3 or less regardless of whether no external signs of bole defect existed.



Dead Down Tree No. 282



Class 1 Tree No. 388



Class 2 Tree No. 386



Class 3 Tree No. 403



Class 4 Tree No. 127



Class 5 Tree No. 49

LAST OF THE MOHICANS

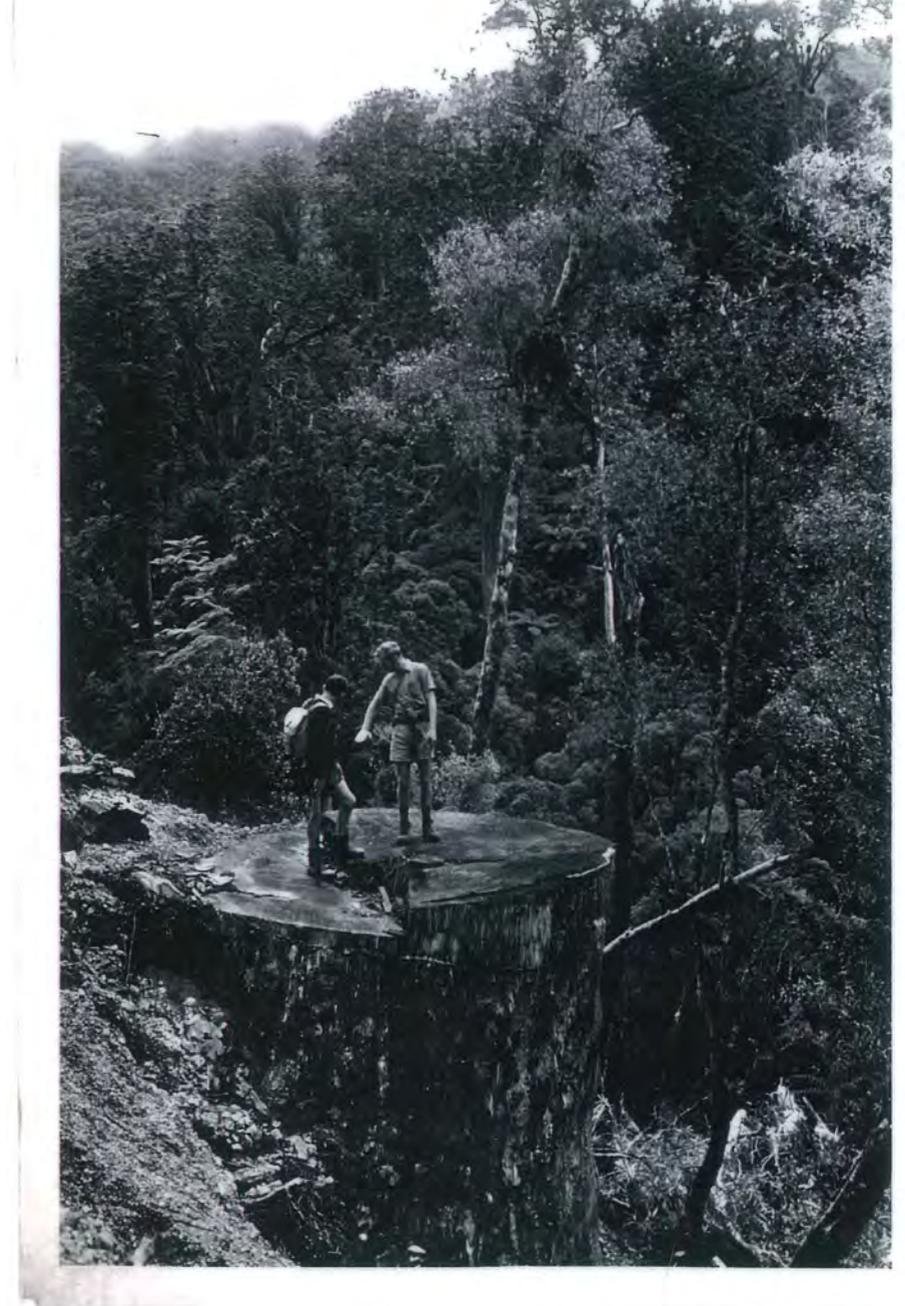
This is the stump of one of the last & largest kauri trees to be cut on State Forest land on the Coromandels. It was cut in April 1970 by the Thames Sawmilling Co. on the southern edge of the Manaia Kauri Stand shortly before proclamation of Sanctuary status which effectively stopped all kauri logging on the Peninsula – some M.O.F permits are still operating on private land for small quantities of dead kauri only.

This tree yielded a log of 9.7 metres C.G.I.B X 10.67 metres length plus a toplog of 5.79 metres C.G.I.B. X 3.35 metres length.

Timber volume yielded 89.7 cubic metres.

Photo taken in 1971.

John Nichols F.R.I. Scientist (left) & Max Johnston Forest Ranger in photo.



SALVAGED KAURI LOG

This kauri log was salvaged from the Kauaeranga River by the Thame District Forest Service Rugby Club in January 1980.

It measured out at 23 ft length X 14 ft C.G.I.B. == 265 cubic feet or 2,500 Haakon Dahl or 7.5039 cubic metres.

Put up for sale in February 1980 for an asking price of \$168.00/cu.m. = total price \$1260-00.

Aitkenhead of Pokeno (keen rugby enthusiast) offered \$1325-00 which was accepted by the Club on 14-2-80

Photograph taken January 1980.



D SCOBIE - WHITIANGA

Application for DEAD KAURI TREES



DEAD KAURI OPERATION KAIMARAMA

SEPT.-DEC. 1983

(Authorised by NZ Forest Service Thames District)

Mr Don Scobie of Whitianga won a NZ Forest Service advertised contract for the helicopter removal of 4 dead kauri trees within the Kaimarama Catchment of the Coromandel Forest Park in late 1983.

The dead trees were sited on minor ridges with a generally southerly facing aspect about a mile inside the Park boundary. Old stumps in the vicinity indicated that other kauri were removed at around the turn of the century and it is assumed that these 4 trees were left because they were already dead. There is evidence of old fires in the area which probably killed these trees.

The trees measured out as follows:

Tree 1 – 15ft Girth @ breast height X 14ft height = 251 cu. ft.
 + 10ft “ “ X 16ft “ = 127 cu. ft.
 = 378 cu. ft. or 9.57 cu. m.
 less deduction of 10% = 8.61 cu. m.

Tree 2 – 32ft Girth @ breast height X 26ft height = 2118c. ft. or 59.99 cu. m.
 Less deduction of 50% = 29.99 cu. m.

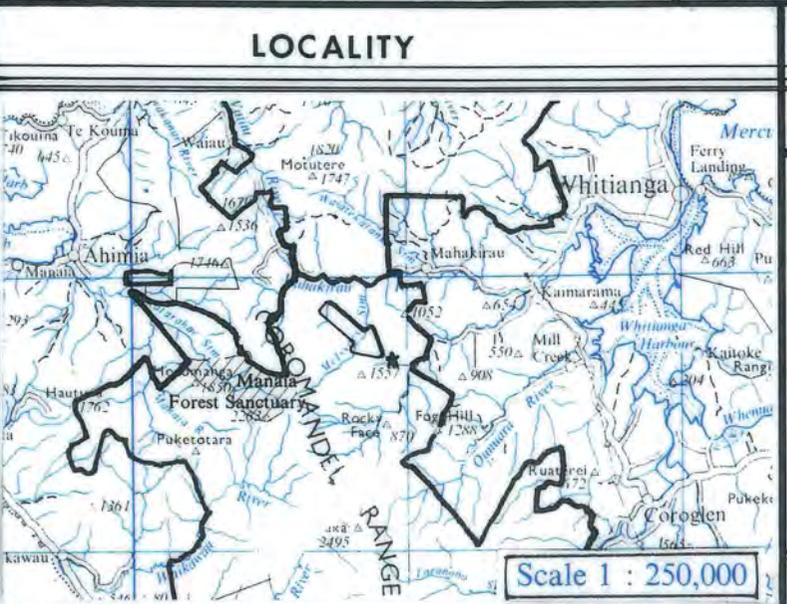
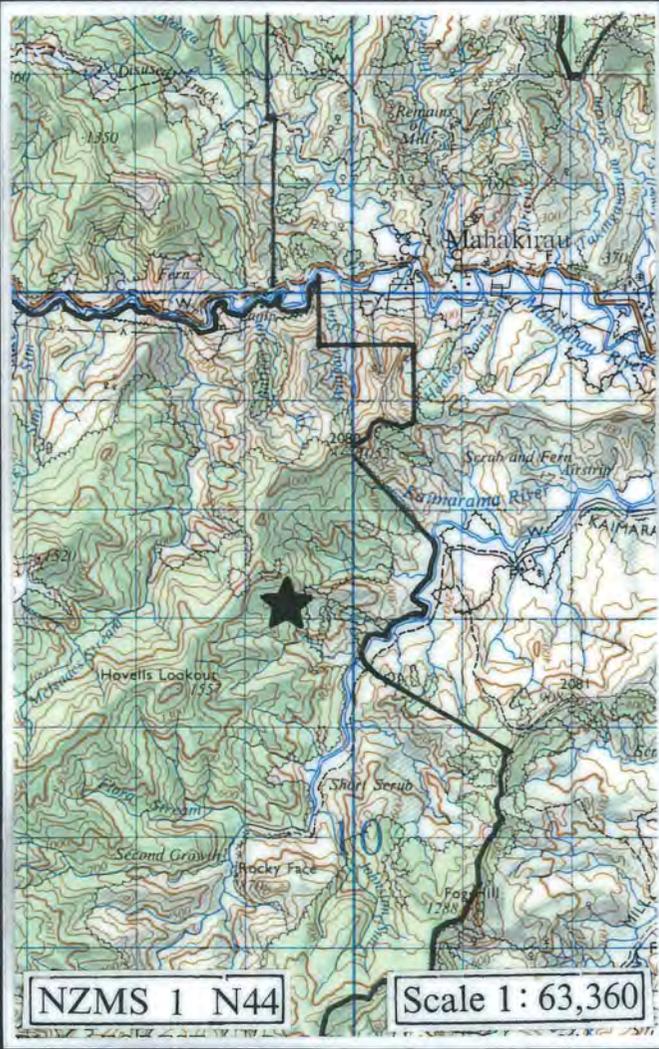
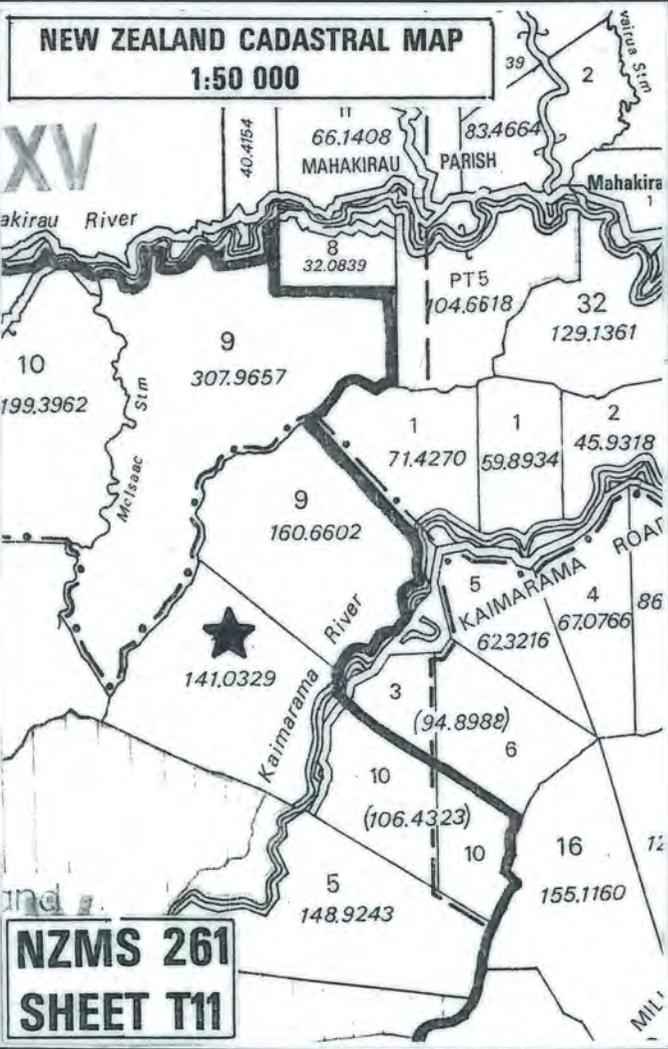
Tree 3 – 15ft Girth @ breast height X 36ft height = 716 cu. ft. or 20.27 cu. m.
 Less deduction of 50% = 10.13 cu. m.

Tree 4 – 19ft Girth @ breast height X 36ft height = 1034c. ft. or 29.28 cu. m.
 Less deduction of 20% = 23.42 cu. m.

Total volume approx. 70 cubic metres.

Dendrochronological Study:

Cross sections of the trees were sent to Auckland University for dendrochronological study by Dr. Johnn Ogden where ring widths are measured from outer to tree centre and then related to measured climatic parameters including rainfall, temperatures etc.



LOCALITY	REFERENCE
	SECT. 1 BLOCK IV HASTINGS S.D.
	WHANGAPOUA S.F. 16A
	COROMANDEL STATE FOREST PARK.
	LOCALITY OF DEAD KAURIS.

Scale 1 : 250,000

RA60 83

THAMES DISTRICT

HAURAKI HERALD 28-1-84

Kauri timber extracted by helicopter

By Denise Landau

Four dead kauri trees, cut and milled by Whitianga engineer, Donald Scobie, cost more than \$30,000 to extract.

About 60 tonnes of useable timber was salvaged in a felling operation which took four months from September to December last year.

Conservator of Forests, Gavin Molloy, gave his approval for Mr Scobie to fell the trees on Coromandel State Forest Park land at Kaimarama Road, south-west of Whitianga.

Nearly 15,000 super feet of timber went to Sir Jack Butland (of Butland Industries) in Auckland to build an 18m (60ft) square-rigged schooner — similar to the Spirit of Adventure.

Other wood was sold to boat-builders who pre-ordered it, and the rest of the material is to be sold as furniture wood.

About 50 per cent of the wood was useable out of the total amount flown out of the felling area by helicopter, said Mr Scobie.

The unuseable timber was left on site to become part of the bush biomass. "It was surprising to see that young native trees

had started to regenerate in the area while were there," he said.

One tree that both Mr Scobie and the Forest Service thought would be a high yielder turned out to be rotten, and its yield was 14 metres less than estimated.

After being felled, the trees were cut into tonne-weight lengths and flown out by helicopter to a portable mill.

The work took up to six weeks longer than Mr Scobie had anticipated and that added to operation costs, he said.

The money he has received had now covered the costs of the operations but more money is expected to come in through sales of furniture-graded wood.

He said the demand for furniture-graded kauri had a slow but steady market.



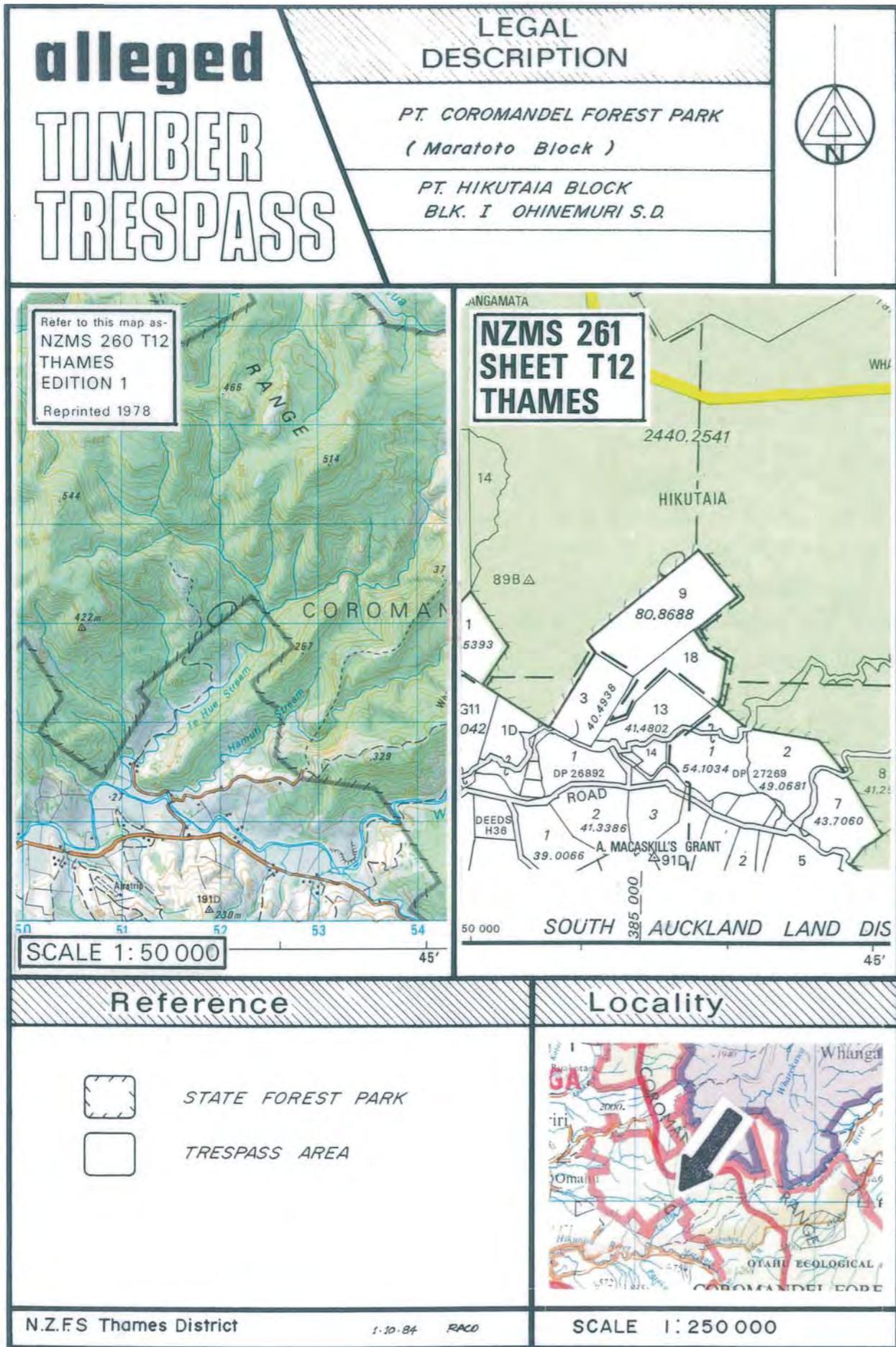
↑ HELICOPTER LIFTING GEAR INTO AREA OF 3 STANDING KAURI TREES (+ 1 DOWN TREE) WITHIN KAIMARAMA CATCHMENT OF COROMANDEL FOREST PARK

← TREE 4 BEING PREPARED FOR FELLING. THE TREE WILL BE FELLED INTO A STRIP CLEARED OF VEGETATION FOR OPTIMUM EFFICIENCY & SAFETY CONDITIONS WHEN BREAKING DOWN INTO APPROPRIATE SIZED FLITCHES FOR REMOVAL BY HELICOPTER ONTO ADJOINING FARMLAND ABOUT 1 MILE TO THE EAST FOR RE-SAWING ON A PORTABLE SAWMILL.



FLITCHES BEING PREPARED FOR HELICOPTER AIRLIFT ONTO ADJOINING FARMLAND FOR RE-CUTTING BY PORTABLE SAWMILL.

FLITCH SIZE RESTRICTED TO 1 TONNE MAXIMUM FOR HELICOPTER LIFT CAPACITY.



Site of Kauri Timber Trespass Maratoto Blk Coromandel Forest Park 1984



NZFS Log Auction of Trespass Logs at Puriri 10-3-85

TRESPASS LOG LOTS READY FOR SALE - PURIRI 10-3-85



3 illegally felled kauri 11-1-84



Snigging out onto private land



Log dump on private land



**DEAD KAURI EXTRACTION OPERATION UNDER M.O.F.
PERMIT ON PRIVATE LAND NEAVESVILLE**



Aerial view of approved bush site



Peterson Mill on approved site



Dead down kauri logs being readied for conversion to sawn timber (Pegleg)



Steven Cuff & airdropped sawn kauri packets totalling 21.507 cubic metres sawn



Helicopter airdrop of flitch timber on Neavesville roadside



Truckload of kauri timber off to market (Bruce Sklenars)

***AERIAL HELICOPTER EXTRACTION OF DEAD KAURI
PAKIRARAHİ BLK NEAVESVILLE 1998***



**53 kauri fitches airdropped at this site for carting away by truck for re-sawing
at an offsite mill – measured out at 27.556 cubic metres 5-3-98**



Cliff Heraud - Original Instigator of Kauri 2000 giving speech



Prime Minister gives speech & plants 10,000th tree for Kauri 2000
at Shakespeare Cliff ceremony Cooks Beach 11th Aug. 2001



Dame Catherine Tizard & Cliff Heraud planting first kauri tree

**FINIS - TEMPORARY ONLY FOR THIS CONTINUING
STORY**



Donor's name _____

Address _____

Telephone _____

Email _____

I would like the following wording to appear on my commemorative inscription(s) (Up to two lines of 25 characters (including spacing) each):

NB: If you require multiple inscriptions please specify details clearly. Use another sheet of paper if necessary.

Donor signature

Kauri 2000 Trust
PO Box 174
Whitianga, 3542
New Zealand
Tel 64 7 866 0468
info@kauri2000.co.nz

Valid at February 2011. Conditions may change

WHERE DO WE PLANT?

Our planting sites are predominantly on Department of Conservation land or land that will remain in public ownership in perpetuity, to ensure our kauri are protected and free right of access can be guaranteed in future years (QEII covenanted land is considered on a case-by-case basis.)

HOW YOU CAN HELP

- Support our Kauri 2000 planting sites with your donation!
- Send Kauri 2000 Certificates to celebrate special occasions and special people.
- Make a general donation to help offset the operating costs of the Trust.
- Become a Friend of Kauri 2000.
- Help us plant, monitor and maintain trees, distribute our brochure and newsletters.

WHO CAN TAKE PART?

Everyone - families, individuals, whanau, friends, visitors, communities, businesses, schools. All you need to do is make your donation, we'll do the rest. Plant kauri every year - for each of your children, for your grandchildren, to remember a special person or a special holiday or anniversary, to offset your carbon footprint, to say 'thank you' to customers and staff.

ARE YOU A VISITOR?

What better way to remember your visit to the Coromandel Peninsula? Even if you are far away, you will know there'll always be a piece of your heart in the kauri forests of the Coromandel and that, better still, the trees you donate will offset the carbon footprint created by your visit. We will plant your kauri and send you a certificate identifying their location. And what a great reason to return, to see the forest you have helped create!

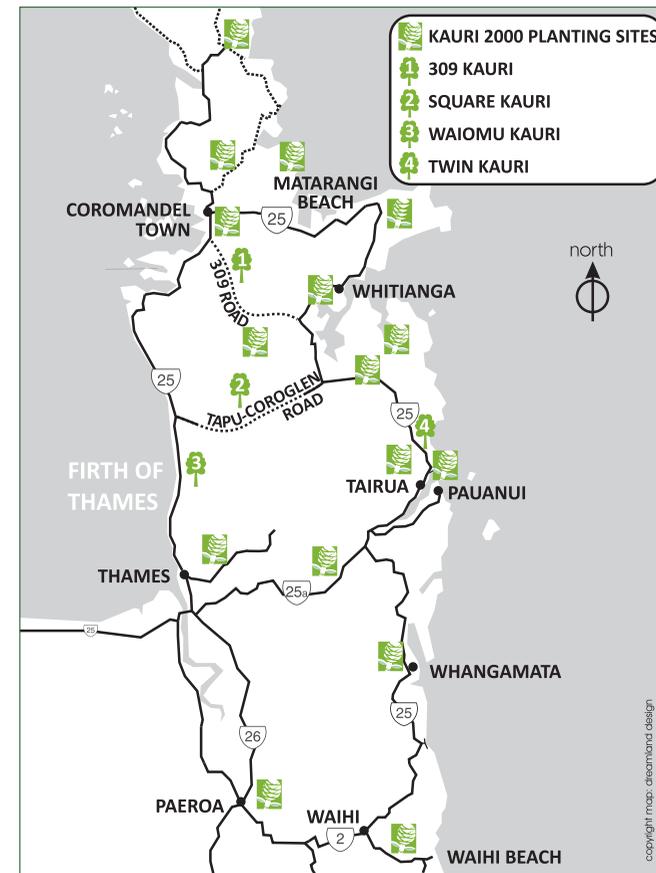
FROM THE FOUNDER

We have now well and truly exceeded our original target of 2,000 kauri to celebrate the second millennium, planting over 30,000 trees in our first decade, with more to come!

From small beginnings, Kauri 2000 has attracted worldwide interest. Every tree, every donation, helps to recreate a new forest and builds a legacy for future generations to enjoy.

Join the Kauri 2000 family today and help us achieve this dream.

Cliff Heraud
Founder



WARNING

To prevent the spread of kauri dieback disease (www.kauridieback.co.nz), clean all soil off footwear and equipment before and after visiting any kauri forests in the Coromandel, Auckland or Northland.

Plant a kauri

recreate a forest!



www.kauri2000.co.nz



WHAT IS KAURI 2000?

Kauri 2000 started as the seed of an idea to celebrate the new millennium in a way that would recognise the Coromandel Peninsula's special environment and build a unique natural legacy for future generations.

Our goal is simple... to help recreate the magnificent kauri forests of the Coromandel Peninsula.

Why kauri? This noble tree holds a special place in the Peninsula's history. Magnificent forests once dominated our landscape. Sadly, after nearly two centuries of exploitation, only a handful of mature trees survive as lonely individuals or in small isolated stands in the rugged hills.

We believe that if all of us who love the Coromandel work together to give nature a helping hand, we can make real progress towards restoring the forests to their former glory.

Today, thanks to tremendous community support, we're taking the first steps towards a future when groves of these trees will once again dominate the forest canopy - with the potential to endure into the Fourth Millennium!

"I am enthusiastic about the aims of the Kauri 2000 Trust and honoured to be its Patron. What a simple, sensible idea, to plant kauri ... lots of them! What a great way to end two centuries of neglect and destruction of our natural heritage."

Dame Catherine Tizard
Patron, The Kauri 2000 Trust

HOW IT WORKS

Kauri 2000 is a registered Charitable Trust under the Charitable Trusts Act 2005 and is one of only a few volunteer organisations in New Zealand to have a formal Memorandum of Agreement with the Department of Conservation.

- Every donation helps us plant and care for more kauri.
- We work with the Department of Conservation, New Zealand Transport Authority, the Thames-Coromandel and Hauraki District Councils and others to identify and establish special Kauri 2000 planting sites around the Peninsula.
- The Kauri 2000 Trust buys the seedlings and prepares the land for planting.
- Every winter, volunteers carefully plant the 600mm-high trees, creating the forests of tomorrow.
- We record the location of all planting sites and trees in our database, and every donor receives a certificate identifying where the kauri bought with their donation are planted.
- We then monitor and maintain all planting sites for at least five years until the trees are established.

CARING FOR OUR KAURI

It is important our kauri get off to the best possible start and this starts with strong, healthy eco-sourced seedlings supplied by selected nurseries.

- Each site is cleared of woody weeds before planting.
- Planting takes place in June-July (the best time to plant kauri on the Coromandel).
- Volunteers take special care to use correct planting techniques. Every seedling is planted with slow release fertiliser and a soil wetting agent, and staked if necessary, to encourage a strong start.
- We record the location of all planting sites and seedlings, and check every tree within a few months of planting.
- We monitor and maintain all planting sites for a minimum of five years. (However our goal is to recreate forests, and because Nature will take her course we do not always guarantee to replace individual trees.)
- We have a proven track record and work with acknowledged experts and scientists to ensure we adhere to 'best practice' standards.

HOW TO MAKE A DONATION

Simply complete the order form and send it with your cheque to the Kauri 2000 Trust. You can also make a donation online at www.kauri2000.co.nz using our secure payment facility. We will send you a receipt and a Commemorative Certificate identifying the site where the kauri are to be planted.

BE A GOOD FRIEND

For just \$25 annually you can become a Friend of Kauri 2000. We'll send you our newsletter twice a year, and keep you up to date with news about kauri. You can also support our annual operations and maintenance programme. We are also looking to establish long term relationships with suitable businesses and organisations who share our vision - contact the Trust for more information.



**To: The Secretary
Kauri 2000 Trust
PO Box 174
WHITIANGA 3542**

YES I want to help restore kauri forests to the Coromandel Peninsula and support the work of the Kauri 2000 Trust.

My donation is enclosed for the following:

(insert number) **seedlings @ \$20 each to be planted on public land** Total \$ _____

(insert number) **Kauri 2000 Commemorative Certificates at no extra cost** (only available with tree donations as above).

(insert number) **Commemorative inscription(s) to be placed near the planting site** (\$10 each). Total \$ _____

I would also like to make a donation towards land clearing and other running costs of the Kauri 2000 Trust. Total \$ _____

I have enclosed my \$25 to become a Friend of Kauri 2000. Total \$ _____

TOTAL AMOUNT (ENCLOSED) \$ _____

(Note: Donations over \$5 may be claimed as a tax credit)

Please make sure you complete your address details overleaf.