



CONSERVATION
TE PAPA ATAWHAI

CONSERVATION ADVISORY SCIENCE NOTES

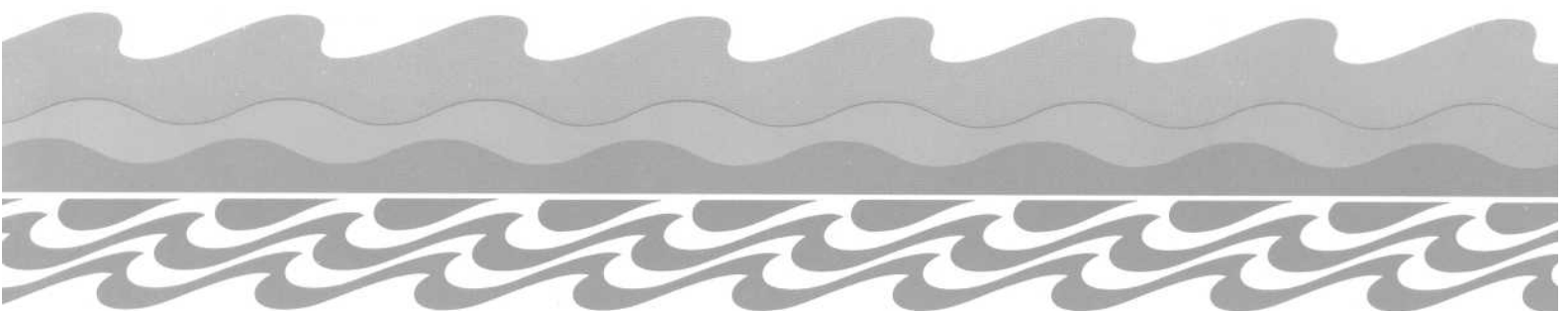
No. 28

TROUNSEN PARK KAURI DIEBACK 1993

(Short Answers in Conservation Science)

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Department of Conservation, P O Box 10-420, Wellington, New Zealand



ISSN 1171-9834

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Reference to material in this report should be cited thus:

Bartram, D., 1993.

Trounsen park kauri dieback 1993.

Conservation Advisory Science Notes No. 28, Department of Conservation,
Wellington. 6p.

Commissioned by: Northland Conservancy

Location: NZMS

Trounsen Park

Kauri dieback 1993

Brief:

To inspect the Trounsen Kauri reserve for the cause of dieback, to advise on remedial action where necessary. Provide a written report.

Summary:

The large mature Kauri trees (*A gathus australis*) which have died out over a period of years invariably had indications of previous damage to the lower stem or root structure. No recent or ongoing decline in Kauri health or vigour was apparent with the main reserve stands or regeneration.

Field inspection:

The Kauri reserve was inspected with Ranger in Charge Mr Boyd Parker, where the dead trees are located along a public access track.

The large dead or damaged trees along, or near the track perimeter have died out as individual trees, often many metres apart. During this inspection 5 large dead Kauri were inspected and all trees except 1 had previous damage from what appeared to be logging damage many years ago.

Damage to lower trunks where logs had been snigged around a standing tree, tearing away the protective mound of humus, and surface roots, plus large sections of bark and cambial wood was the possible cause.

These large scars have in some cases almost occluded over with replaced wound wood, and bark. However pathological problems and rots have invaded these areas and large sections of the trees interior are obviously rotten.

2 trees which had damage probably within the same time, had almost healed over the initial damage. The extent of heart rot can not readily be determined as the trees, apart from the damage appear quite healthy.

One dead tree is now in the process of losing the large crown branches and bark, also an adjacent mature Taraire has died out. Both trees have fungus *Rhimomorphs* of *Armillaria* spp. present under this shedding bark. This Kauri has been dead for years, as the collapsing crown and shed bark plus heavy insect attack by the Hu Hu etc, are indicated that both heart and sap wood have been dead for some years. Also this tree is covered in the bracket fungi (*Ganodernia applanatum*) which produce white wood decay.

Conclusions:

There is no remedial action for the problem which would be of practical value, as the extent of rots from the wounding could vary from on site damage to extensive heart rot within the main stem.

Recommendations:

The present construction of the excellent board walks in both a practical and efficient method of protecting the natural forest floor from compaction damage by the many visitors to the park.

Utilising this method around the affected trees and removing compacted metal covered tracks would be of continued value for tree protection.

With the overhead dead crowns and large chunks of near shedding bark, the at risk situation for the public must be a concern.

The only solution to this is to re route boardwalk access away from these sites, as felling is hardly an environmental option.

One quite noticeable feature within this reserve stand is that even though the viable seed source is huge, within the Kauri stands the amount of regeneration that has occurred for many years is almost non existent.

The remaining trees from the clearfelled *P. radiata* stand has provided an excellent windbreak in protecting the S. West margins of the reserve.



Dave Bartratn
Senior Forest Protection Officer.

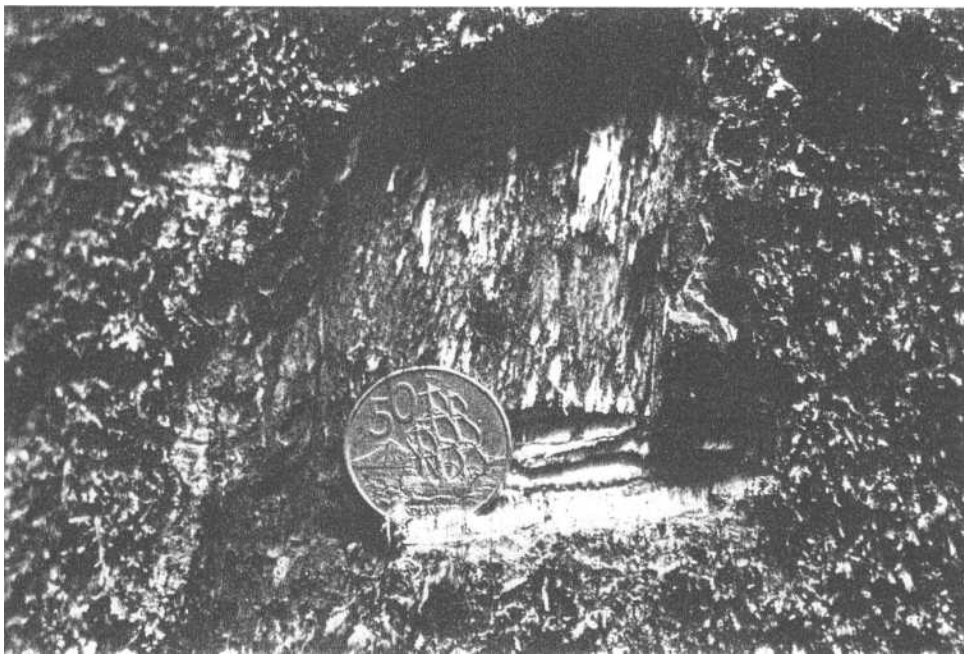
Ministry of Forestry
Kaikohe

Large Kauri
Sheetling bark.



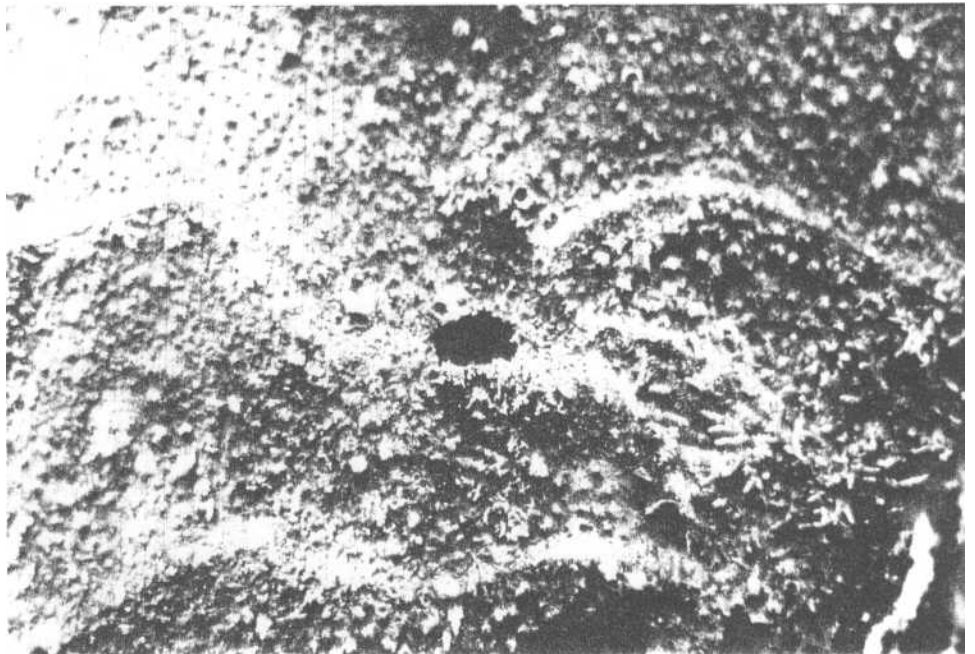
Kauri - dead.
Collapsing crown
heavy insect damage.



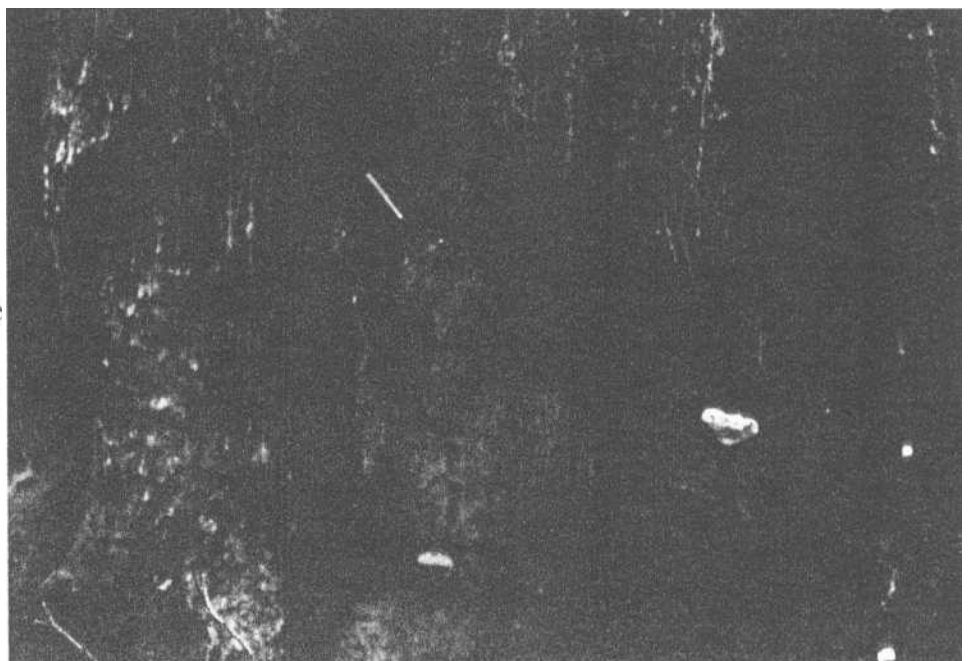


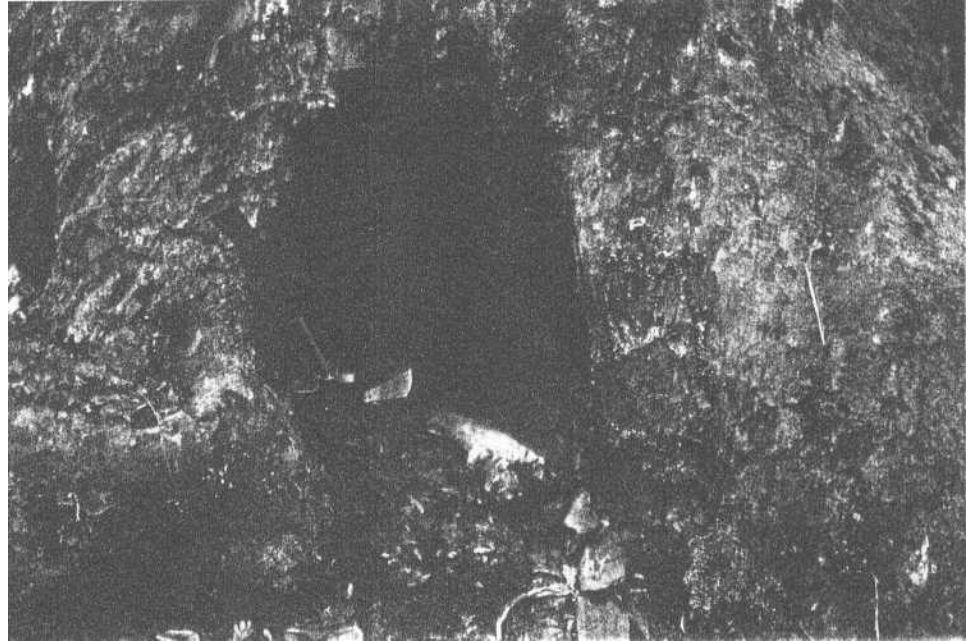
Insect damage

Hu Hu
emergence
hole



Large patch of damage
extending into heart
rots.
Bracket fungi





Lower stem wounding showing
heartwood rots.



Stemwound growing over.