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AN ASSESSMENT OF LOG DEBRIS IN KARRI

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MANJIMUP RESEARCH

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SUMMARY

The amount of log debris remaining after cutting was assessed in 10 areas of karri regenerated between 1968 and 1982, in order to compare the conditions within coupes established before and after the advent of woodchipping.

There was no reduction in the total number of logs after woodchipping however a reduction in the number of logs greater than 600 mm diameter was apparent. The resultant apparent increase in logs in the smaller size classes is thought to be caused by the lower amount of decomposition, the lower quantity of litter and trash covering, or a difference in stand structure at the time of cutting.

INTRODUCTION

Log debris has a high potential for causing butt damage to young karri regeneration during prescribed burns. During discussions at the 1983 Forests Department Research Conference it was put forward that a reduction in debris had been achieved with the advent of the woodchip industry. This study was established to test this assumption in the field.

METHOD

The areas sampled were chosen to give as wide a range of ages as possible under 15 years. The sites were as well dispersed over karri and karri/marri forest as possible, although some grouping was inevitable as cutting coupes are frequently concentrated in definite areas each year (Table 1).

The areas sampled which had woodchips removed were those regenerated in 1977, and 1982.

TABLE 1

REGENERATION YEAR	BLOCK + COMPARTMENT NO.	6 FIGURE MAP REFERENCE
1968	POOLE 3	HU 79 12
1968	POOLE 12	HV 79 44
1972	WARREN 2	HU 61 24
1973	POOLE 11	HW 78 97
1975	SHANNON 10	JA 47 98
1975	NAIRM 3	HS 74 39
WOODCHIP INDUSTRY COMMENCED ON OPERATIONAL SCALE		
1977	DOMBAKUP 17	HX 60 93
1977	WARREN 6	HV 60 53
1982	DOMBAKUP 19	HY 61 99
1982	WARREN 2	HU 62 59

Not typical.

Are pure karri?

At each sample point 300 metres of transect line was established in a triangular configuration with the start point at least 20 metres from the road edge to reduce edge effect. Areas disturbed by pushing in or landings were avoided.

All logs above 75 mm in diameter were tallied in 150 mm classes, with all those above 900 mm diameter grouped in one class. The tallying rules and volume calculation method adopted was the one laid out by C.E. van Wagner in "The Line Transect Method in Forest Fuel Sampling" (Forest Science, Vol. 14, No. 1, 1968).

RESULTS

The contact numbers and volume for each diameter class were entered on histograms (Figure 1 and 2) against time to give an indication of the change taking place. However, with the bias which is evident from the larger logs contributing volume far in excess of their damage potential, it was decided to use the contact comparison.

The total number of contacts had not noticeably reduced since woodchipping although the number of logs over 600 mm diameter has been

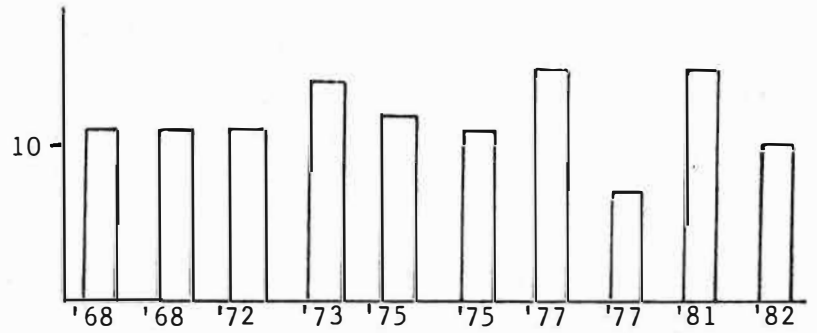
reduced. This means an increase in the number of small diameter pieces i.e. 75 mm to 300 mm has occurred. This may be due to the fact that small material in the older stands has become covered by litter and trash and was thus not recorded or it has decomposed.

CONCLUSION

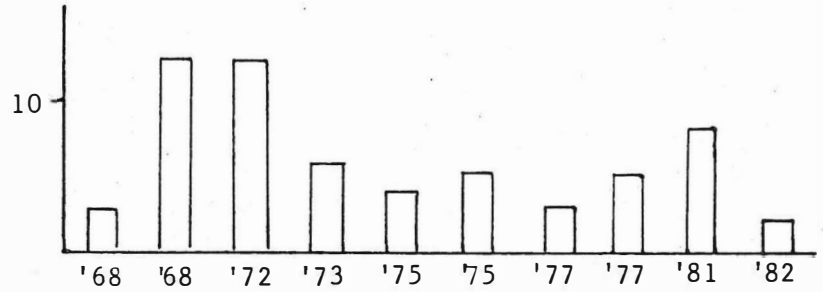
The reduction in log debris since woodchipping is found only in logs greater than 600 mm diameter, but no overall reduction in log numbers in logs over 75 mm diameter is found.

The amount of damage caused by each log size class is not known at this time. This knowledge is hoped to be gained from work at present under way on fire damage in young even-aged karri stands. When the result of the fire damage study is known a better assessment of any further work necessary can be made.

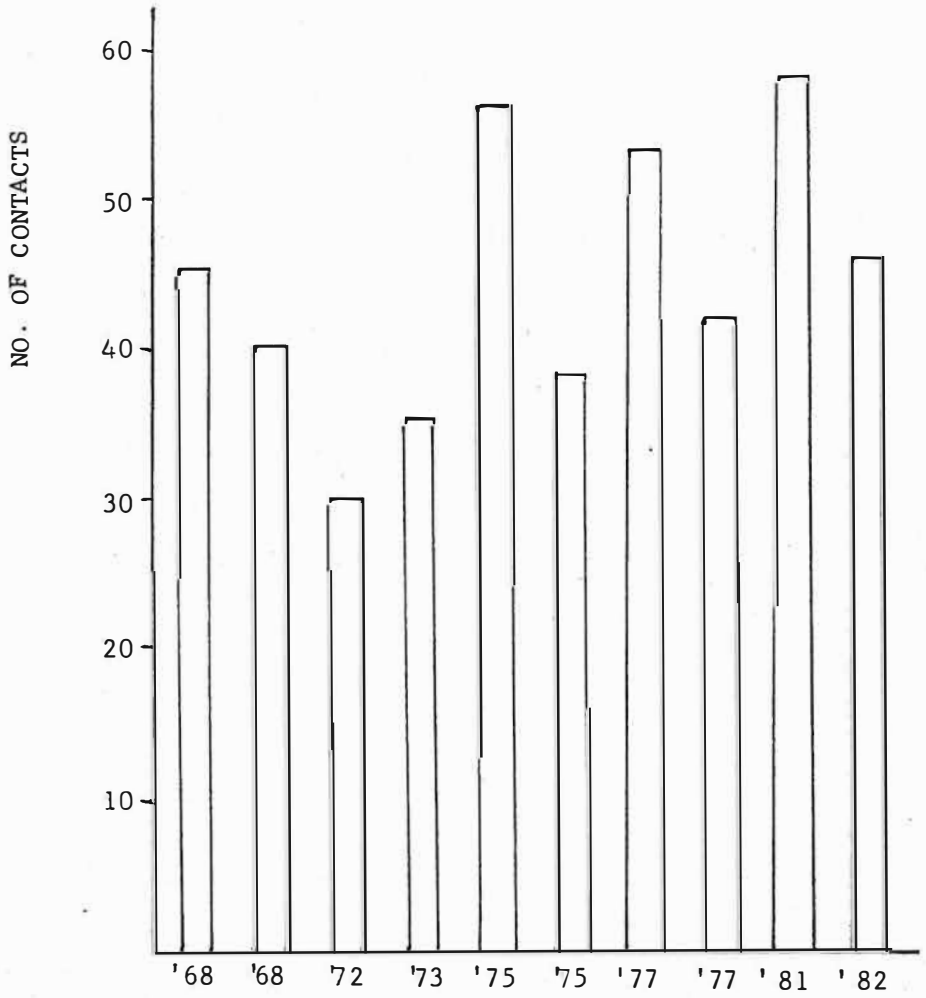
KARRI REGEN. LOG ASSESSMENT 1983



300 - 600mm DIAM.



600+ mm DIA.



75 - 300mm DIAM.

KARRI REGEN. LOG ASSESSMENT

VOLUME/HECTARE BY SIZE CLASSES