BURNING IN KARRI FORESTS

by

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Having read with interest, articles by Nicol, Ward and Christensen, I am prompted to add to these articles.

In considering karri burning, the questions arising are -

1. How many litter types are there?

2. What is the correct rotation timing for successful burning of each litter type?

In an attempt to answer the questions, we may best do this by dividing the litter into grades of types. P. Christensen refers to a karri scrub type consisting of -

i. Bossiaca aquifolium (netic)

ii. Acacia pentadenia (karri wattle)

iii. Trymalium spathulatum (hazel and other less dominant species)

It is true that five years after a heavy fire, a community dominated by any of the three major species will be covered by an almost impenetrable stand of mixed scrub.

It is also true that this stand of scrub will not burn in mild conditions at this age and thus usually grows for 10 - 15 years when it becomes a scattered stand of large bushes of karri wattle or hazel of up to 40 feet in height.

The ground litter is made up of grass, tree crown debris, fallen karri wattle and netic and karri bark, making many tons per acre of highly inflammable material.

Often, this type of karri litter is burnt accidentally e.g. lightning strike, and is also very difficult to burn without contributing to a heavy crop of karri wattle and the other undesirable scrub types.

It appears therefore, that this particular karri scrub make up can be divided into three ages : 0 - 3 years, 4 - 15 years and 15 years plus.

Assuming that 15 years plus scrub has been burnt and a dense regrowth of karri wattle, netic and hazel is produced we have -

KARRI LITTER TYPE I From 0 - 3 years old

Composition

Dense karri wattle 4 - 6 feet high, some hazel and netic, bracken fern, grass, a few wild flowers, tree debris (on the ground) with a small amount of tree debris hung up in karri wattle crowns.

This type of litter at three years old will burn with a 6 - 12 inch flame on the ground in "High Summer" conditions.

The result from such a burn is not obvious at the time of burning but never the less, kills the karri wattle and does not germinate a lot of karri wattle seed.

What does grow is bracken fern, wild flowers not seen before and scattered karri wattle. Karri seedlings also appear but will not survive where crown cover is great.

The follow up from this burn is to note that tree debris can fall to the ground and not be caught in karri wattle crowns. After three years another light burn will diminish further karri wattle and encourage smaller plant life to grow. (Orchids will appear and many other plants not previously seen.)

The late Forester, Jack Rate demonstrated this type of treatment in karri forest more than ten years ago and some burning was done like this on the Shannon - Walpole roadside near Mount Burnside with very pleasing results in 1966 - 67.

A three year cycle is possible and can be handled in warmer conditions than exist in our present burning season.

KARRI LITTER TYPE II From 4 - 12 years old

If type I is allowed to grow 4 - 12 years, the karri wattle becomes very dense, will not support other plant

growth and tree debris does not all fall to the ground.

Burning is very difficult and often impossible except under very high conditions. Such fires result in severe damage to the forest and fauna.

Walking lanes must usually be prepared for burning off by hand.

Litter should not be allowed to grow to this type.

KARRI LITTER TYPE III

This has already been described as very old open scrub and highly inflammable. This type can be burnt fairly easily but will often carry another fire within six months if burnt too lightly, thus defeating the purpose of a light fire in retarding scrub regeneration.

Often walking lanes are not necessary for hand burning.

CONCLUSION

Control burn types i and iii and then rotate burning no more than three yearly.

That more burning will therefore have to be done during our hotter months, will mean an extended burning season and will not interfere with wild flowers displays as early spring burning does.

Hotter conditions, but smaller fires will result in ease of lighting and handling, reduced scorch, more wild flowers and easier access for management.

To support small fauna, some areas will no doubt have to be set aside to avoid fires reaching them in the hotter burning conditions.

Try a three year cycle and burn in early summer. Autumn is not favoured because karri wattle seed is mature and will be germinated. By contrast, most wildflowers are sustained by root systems and survive late spring and summer burning.