"THE BACKGROUND TO THE DEDICATION OF DRYANDRA STATE FOREST"

BY R. GERMANTSE
ADFO
DEPARTMENT OF CALM

THE HISTORY OF DRYANDRA FOREST

1.0 INTRODUCTION

Dryandra Forest is the collective name given to three State Forests namely State Forest 51 (Lol Gray), State Forest 52 (Highbury), and State Forest 53 (Montague). As at January 1987, the total area of Dryandra Forest was just over 26 000 hectares (Table 1).

TABLE 1: Area of State Forest Making up Dryandra Forest, as at January, 1987.

Lol Gray	185321 ha
Highbury	3529 ha
Montague	4000 ha
DRYANDRA TOTAL =	26 061 ha

The history of Dryandra Forest can be traced back to the earliest years of this Century. The natural forest within Dryandra proved valuable for the brown mallet (Eucalyptus astringens) it contained. The mallet was heavily utilized for the tannin within its bark, having a tannin content of 40% or more. (Australian Forestry Journal, 1925[a]).

The degree of exploitation was almost the cause of extinction of brown mallet. Farmers were settling the land at the time and were keen to harvest mallet to raise capital to develop their farms. Regulations were later introduced to restrict the level of exploitation of mallet forest. Lack of staff initially made the enforcement of these regulations extremely difficult.

...2/

It was not until the 1920's that the first areas of mallet were reserved. These reservations have proved to be the major reasons why Dryandra forest has survived to be as it is today.

2.0 EXPLOITATION OF MALLET BARK FOR TANNIN

2.1 INITIAL EXPLOITATION (from 1903)

The value of mallet bark for use in the making of tannin extracts was first discovered by German scientists in 1903. As a result the Germans took to importing large quantities almost immediately. Initially the resource came from areas which were 'within payable distance' to the Great Southern Railway (Woods and Forests Department, 1907). However, by 1907 such areas were virtually cut out. As mallet was discovered throughout the Great Southern District utilization spread away from the railway line to new areas. Reports indicate that utilization of the mallet resource for bark tannin was nothing short of exploitative. It was described in an article in the Australian Forestry Journal, 1925[b] as 'frenzied exploitation', and indications from this article are that supplies were very depleted. A real danger of the species being cut-out entirely was reported as early as 1908 in the Annual Report of the Woods and Forests Department. It said 'The ultimate destruction of this eucalypt is only a matter of time'.

Two major causes are seen as responsible for development of the situation where most of the mallet had been heavily cut during the period from 1903 to 1925.

2.2 EXPLOITATION BY FARMERS

The first is that pioneer farmers of the district quickly realized the value of brown mallet bark to the tannin industry and began the in-discriminate stripping of trees.

...3/

As farmers needed capital to develop their farms they saw the mallet forests as a means by which they could raise that capital. (Cooper, 1962). Even though the land on which mallet grew was of little use for agriculture, large areas were alienated and taken up by farmers. It was reported by Forest Ranger J.H. Gregory in the 1904 Annual Report of the Woods and Forests Department of W.A. that a great deal of land was applied for merely to secure the mallet bark growing on it.

2.3 LACK OF GOVERNMENT CONTROL

The second reason for the degree of exploitation was the lack of Government controls on the cutting or export of bark.

In 1904, three Forest Rangers were appointed to supervise the mallet bark stripping along the Great Southern Railway. However their early reports express how onerous this task was, having to cover large distances to inspect the mallet forests. According to Forest Ranger McVicar (Woods and Forests Department, 1905) of Katanning, the early strippers wanted to

> 'secure as many tons as possible in the least possible time; hence a great area was quickly run over, the trees being only partially stripped. The heaviest bark around the butt only being taken off; in many instances there was more bark left on the trees than was taken off'.

However he reported that after regulations were introduced which necessitated the falling of trees and the stripping of bark from the limbs as well as the bole, a large degree of waste was done away with. Another regulation which was introduced (probably after 1913) restricted the cutting of trees below a certain diameter.

...4/

Despite the best intentions, the regulations introduced by the Government were of little use in attenuating the scale of overcutting of the mallet forests. Many of the regulations were introduced too late to be of benefit. The enforcement of regulations was limited by the number of staff, and breaches of regulations were more common than adherance to them. (Cooper, 1962).

2.4 LEVELS OF MALLET BARK EXPORT (1903 - 1925)

The best indication of production levels from the mallet zone as a whole are found in past Annual Reports of the Forests Department. These records do not isolate Dryandra Forest individually, but record the quantities of mallet bark exported from W.A. Figure 1 illustrates these records and reflects the level of mallet exploitation which initially occurred, and the subsequent decline in mallet export.

In 1903, the first year of mallet bark export, 138 tons earned £859. In 1905 the trade peaked with £154 087 being earned from 20 700 tons. By 1925 the export of nearly 130 000 tons of mallet bark had earned the State over £1 000 000 since 1903. However, most of this production occurred prior to the First World War. As Germany was the main buyer of the bark, export declined during the war years, giving the mallet area a "well-earned rest". (Woods & Forests Department of W.A., 1917).

Although production of mallet bark continued after the First World War, it never attained the high levels reached in the first decade of production. This was largely due to the exploitation in the earlier years making the resource particularly scarce (Australian Forestry Journal, 1925 [a]). It was in the early 1920's that the Forest Department introduced measures to protect the future of mallet forests.

...5/

3.0 RESERVATION OF MALLET AREAS

3.1 THE NEED FOR RESERVATION (into the 1920's)

If regulations and staff numbers were not sufficient to halt the destruction of mallet, then it would seem that the introduction of some form of Government Reservations, on which mallet bark stripping was forbidden or restricted, would have been an appropriate means of action. This in fact did occur, but not until much of the damage had already been done.

In 1908 the Acting Inspector General of Forests expressed the dilemma which the Woods and Forests Department faced in regard to reservation of mallet areas.

'It might be said that the Department should have reserved large areas of mallet country so as to protect the tree from being destroyed, but as it is found only in strips and patches spread here and there over a large extent of country, it would be impossible to do this without locking up large areas of land suitable for selection, and thus retarding the settlement of the lands.

If areas of pure mallet forest could have been found, it might have been possible to protect them by reserving the land, but even then I fear that it would have ultimately proved impossible to provide for the future maintenance of this tree, as it is only a matter of time when all the natural habitat of the mallet will be alienated under the C.P. or other clauses of the Land Act.' (Annual Report of Woods and Forests Department, 1908).

...6/

His words indicate that the State, although recognizing the need for conservation of the mallet tree, placed more importance on development and settlement of the land. It was not until 1924 that the first mallet reserve was gazetted (file 885/23).

The strippers of the 1920's were desperate for resource. Demand for mallet bark continued, and as the original habitat was scarce, strippers were driven to exploit the young natural regrowth which followed the heavy cutting of ten to twenty years previous. The Conservator of Forests of that time, Mr S.L. Kessell collected a specimen which was about the size of a walking stick and which he said was 'a fair sample of hundreds of other similar saplings which had been stripped standing.' (Australian Forestry Journal, 1925[a]).

Having stripped virgin forest over the two previous decades, the mallet strippers now depended on young regrowth mallet for their resource. The threat to the future existence of mallet was never greater. The Forests Department was well aware of this and the first step towards reservation of mallet forests was taken.

3.2 THE FIRST STEP: MALLET CLASSIFICATION

With the stripping of mallet regeneration threatening the future of the species the Forests Department took steps to preserve the mallet supplies and to provide for the regeneration of the species on suitable land. The first step toward reservation involved reconnaissance and classification of all areas within the mallet zone. This was done by Messrs Nunn, Valentine, Harris and Doig, who were officers of the Forests Department.

...7/

(Mallet Working Plan, 1955). The original surveys and classifications of blocks within Dryandra State Forest are still held today by the Mapping Branch of the Department of CALM. Documentation from 1923 (file 885/23), discussing proposed mallet reserves is included in Appendix 1. These classifications showed that considerable areas of dense regrowth existed on poor rocky hill-tops, which were excluded when the agricultural land was surveyed. (Australian Forestry Journal, 1925 [b] and Actual Maps). An article in the Australian Forestry Journal, 1925[b] reported that

> 'A rough classification of some areas west of Cuballing has shown that very many hilltops which might aptly be described by the phrase "wastelands of the Crown" are carrying surprisingly dense thickets of young mallet,...'

It is very likely that the areas referred to west of Cuballing are actually part of what is now Dryandra Forest, as this area was first mapped in 1924, one year before the above article was published.

Apart from the classifications done at Dryandra, other classification maps were produced for reserves nearby Wickepin, Pingelly and Dongolocking, among others. The original maps produced are also in existence today.

The classification and mapping was done with a view to setting aside these areas as mallet reserves. Once reserved it was intended to protect the existing thickets of mallet and extend their area by developing plantations. Over five million seeds were collected in early 1925 for use in plantation development (Australian Forestry Journal, 1925 [a]).

...8/

It was envisaged that these plantations along with increased Government regulation could ensure future supply of mallet bark.

3.3 DRYANDRA'S FIRST RESERVES

The first areas of mallet reserved in Dryandra were gazetted on 5/9/1924 (p8 file 885/23). These were Reserve No's 18711 and 18712, which are now part of Lol Gray Block and Penny Block respectively (see Map 2). Another reserve was gazetted on 27/1/1925 (Reserve No. 18829); (p18, file 885/23). These areas later were combined and became part of South Block, (now Stokes Block). The total area reserved in these first 3 reserves was 2716 hectares (6712 acres).

Six months later, Reserve No. 18856 was the next to be gazetted. It was probably one of the most significant reservations in the history of Dryandra. It consisted of 26 separate areas, totalling 5634 ha (13923 acres). It was amended to 5738 ha (14178 acres) on 14/8/1925.

A series of plans have been found in the archives of the Mapping Branch of the CALM Dept., which piece together the three stages which figured in securing Reserve No. 18856. Reproductions of these maps are attached to this report as Maps 1, 2 and 3.

Map 1 uses Stokes Block as an example of the mapping and classification which was carried out on all land within Dryandra. The original survey and classification map is dated 18/12/1924 and was prepared by J.S. Valentine. This map classified the vegetation and indicates the existence of mallet areas in this particular location (green on Map 1). Such maps were prepared for all of the Dryandra area. Most were at a scale of 10 chains to one inch (1:7929).

...9/

A map was then prepared at the smaller scale of 80 chains to one inch, or 1:63360 subsequent to the classification plan. It is actually a map summarizing the location of mallet in the Dryandra area. Map 2 is a reproduction of this map. The classification plans, of which Map 1 is an example, were the data base for this second map. Note that the green areas of Map 1 correspond to the green areas within the inset of Map 2.

These mallet surveys and subsequent map production were the basis on which the Forests Department decided which areas should be reserved. Map 2 shows in yellow the areas that were required for mallet reserves. It also shows that areas in each of Reserve No. 18711 and Reserve No. 18829 were then considered available for excision on the basis that no mallet was contained within them.

Map 3 in this series, produced later in 1925, confirms that the areas requested for reservation on Map 2 did later become mallet reserves. Information on the original plan indicates that 26 areas made up Reserve No. 18856 which totalled 13923 acres (5634 ha). The gazettal date is recorded as 31/7/1925. It also indicates that on the 14/3/25 the area was amended to 14178 acres (5738 ha).

This third map shows that the areas reserved in 1925 were very much the foundation for the area which is now State Forest. In particular, large parts of the Forest Blocks now known as Bald Rock, Lol Gray, Penny and Stokes, were initially reserved as part of Reserve No. 18856.

...10/

The impetus to seek reservation of these areas arose in August 1923 when Mr Gardiner wrote his letter to the Conservator of Forests proposing the reservation of mallet near Cuballing (Appendix 1). By August 1925, just two years later, nearly 6000 ha (over 14000 acres) had been surveyed, classified and then reserved.

The current high conservation value associated with Dryandra State Forest today is a direct result of the initiatives of the personnel of that era, who had the foresight to ensure that the mallet forests were protected from the exploitation that had occurred in the previous two decades.

3.4 DEDICATION OF STATE FOREST

The earliest dedication of State Forest in Dryandra was made in 1934. The area dedicated was known as Lol Gray State Forest and was State Forest No. 51 of the Western Australian Forests Department. This dedication was a progression from, and was a direct result of, the extensive survey and classification work carried out a decade earlier.

As the Forest Department proved beyond doubt that other areas were "suitable for the propagation of mallet and useless for agricultural pursuits" (p.31, 1125/53)they were also gazetted as State Forest.

In 1935 Highbury and Montague State Forests were also gazetted. Since then various additions and excisions to the three State Forests have occurred. Table 2 sets out the gazetted area of the Dryandra State Forests at various stages in time since the initial dedication in 1934. As at January, 1987 Dryandra Forest consisted of over 26 000 hectares.

...11/

4.0 CONCLUSION

The high nature conservation value associated with Dryandra Forest today is a consequence of a series of reserves set aside in the 1920's.

The mallet bark industry was well established and created a valuable export trade for Western Australia. However this was to the detriment of the mallet forests, and the future existence of mallet was under great threat. The resource became scarce to the extent that bark strippers had to resort to the very small regeneration on areas they had stripped over the previous two decades. The government then stepped in to ensure the long term survival of the species.

After the initiation of the classification and survey of mallet areas west of Cuballing in 1923, over 8000 hectares of mallet had been given reserve status by 1925. Further reserves were gazetted into the 1930's. Some of these reserves were then gazetted as State Forest in 1934.

The 26000 hectares of State Forest in Dryandra today are centred largely around the reserves, which were initially dedicated in the mid-1920's. Today Dryandra consists not only of mallet plantations, but also includes native wandoo forest.

Set in an otherwise rural landscape, Dryandra Forest provides an excellent habitat for native fauna, contains remnants of vegetation types once represented in this part of the wheatbelt, is a source of marketable mallet timber, and is an asset for recreation, education and scientific study.

...12/

The availability of these assets today is largely due to the initial gazettal of mallet reserves in the 1920's. We can be thankful to those of that era with the foresight to create these reserves.

REFERENCES

Australian Forestry Journal, 1925 (a) "The Exploitation of Mallet Bark" pp 69-72 March 1925

Australian Forestry Journal, 1925 (b) "Protection of Mallet Regrowth" p211, August 1925

Cooper J.F. (1962) "Tannin Resources of W.A., with Special Reference to Brown Mallet and Wandoo" Teachers' Higher Certificate Thesis.

Forests Department of Western Australia - Annual Reports 1918 - 1925

Forests Department of Western Australia - File No. 885/23 & File No. 1125/53

Forests Department of Western Australia - Mallet Working Plan, 1955

Woods and Forests Department of Western Australia - Annual Reports from 1904 - 1917

FIGURE 1

LEVELS OF MALLET BARK EXPORTED FROM W.A. (1903 – 1935)

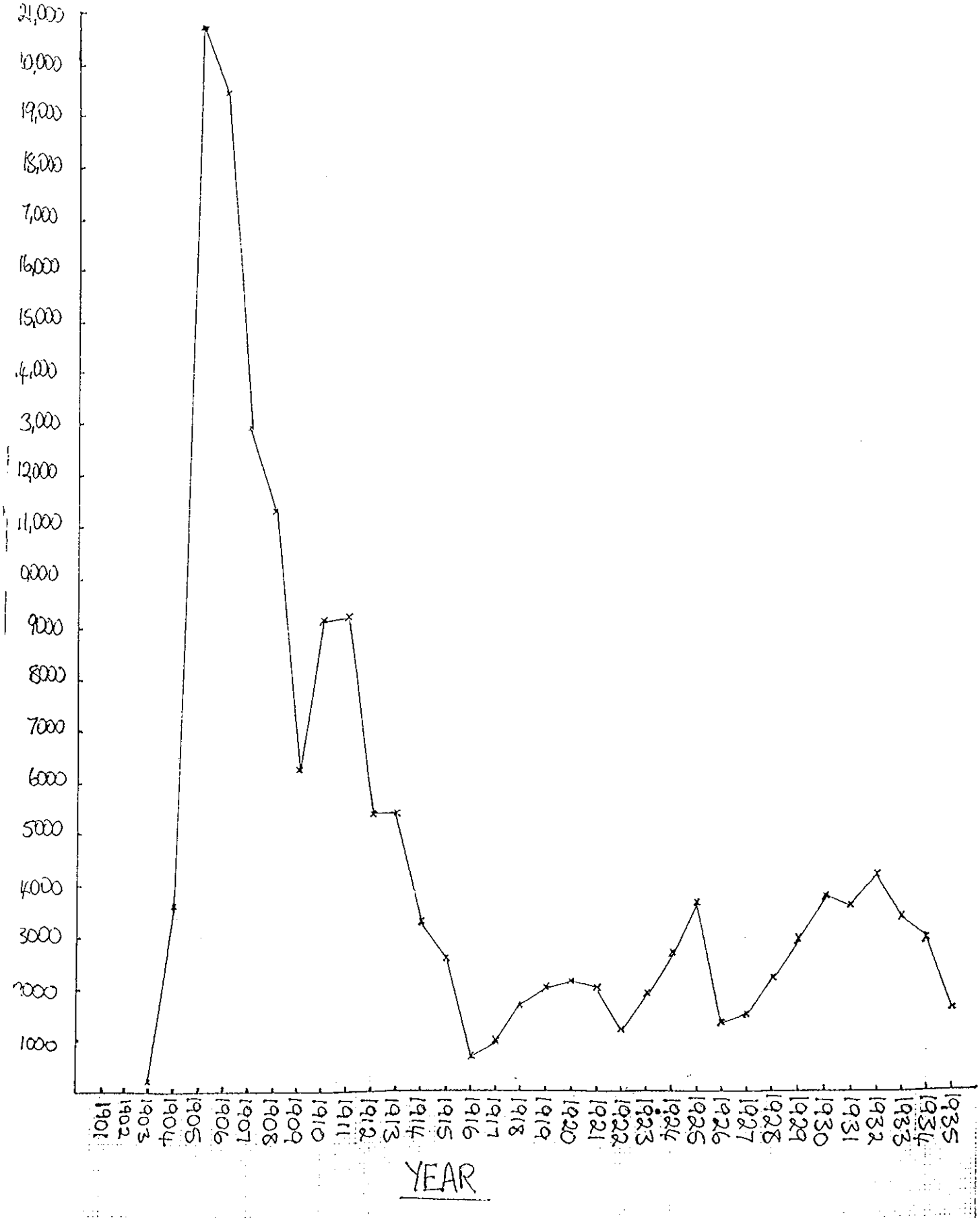

TABLE I

AREA OF STATE FOREST IN DRYANDRA BY DECADE

		STATE FOREST NO. 51	STATE FOREST NO. 52	STATE FOREST NO. 53	DRYANDRA STATE FOREST TOTAL
INITIAL DEDICATION	Acres	12400	3372	6476	22248
	Ha	5018	1365	2621	9004
UP TO 1940	Acres	39477	11854	7053	58384
	Ha	15976	4797	2854	23627
UP TO 1950	Acres	39619	11854	7761	59234
	Ha	16033	4797	3141	23971
UP TO 1960	Acres	40073	10973	8326	59372
	Ha	16217	4441	3369	24027
UP TO 1970	Acres	39548	7312	8158	55018
	Ha	16005	2959	3301	22265
UP TO 1980	Acres	45645	7292	9879	62817
	Ha	18472	2951	3998	25421
AS AT JAN 1987	Acres	45793	8720	9884	64398
	Ha	18532	3529	4000	26061

Appendix 1

3

CONSERVATOR OF FORESTS.

PROPOSED RESERVE FOR MALLET NEAR CUBALLING.

Seven miles west of Cuballing there is a large tract of unoccupied country, and another still larger area 11 miles west, there being at present Crown Lands. Cuballing lies in the western centre of the habitat of the Brown Mallet, in a rainfall of about 16 ins. per annum.

I visited this country in June 1920, and was impressed with the stocking of young Mallets at the time. In the northern parts of its range, the Brown Mallet (Euc. astringens) occurs on lateritic hills, but to the South of Katanning it descends to the richer loamy flats. The country to the south of Wagin, where the Mallet occurs on better soil, the country is now almost all under cultivation, & Mallet is very scarce. Around Cuballing, however, the Mallet trees occupy the worst possible agricultural country, - stony hills and slopes -, and in addition its associates are the Box and York Road poisons (Gastrolobium calycinum & Oxylobium parviflorum). Obviously then, the country is of little use either for cultivation or pastore purposes. Box poison/in particular is always avoided by farmers, because even for years after the poison has been grubbed a fine star a vigorous regrowth of seedlings.

The country under consideration is of this chilly lateritic, and poison-infested type. It would be difficult to form an estimate of its actual area since it was only traversed in one place on foot, but there must be several thousands of acres bearing Mallet. The trees occur in fairly dense thicket-like formation over the hilly ground, the average distance apart being about 20 inches. Of course, all of this country does not carry Mallet to this extent. The valleys produce Marri and Wandoo, also scattered Jam trees, but approximately half the area is Mallet-bearing. Fires are not very prevalent, as it is more wheat-producing than pastoral.

I would recommend that the best of this country be reserved for Mallet, and if necessary, protected. I do not know what the yield of bark would be per acre, but the country this is country that has been exploited in the past, all the mature trees having