



# FOREST NOTES

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### EDITOR'S NOTE

I have often heard the claim that a problem within our organization is insufficient or inadequate communication. One way in which Forest Notes has helped to counter this problem is the inclusion, each issue, of a "Regional Notes" section. The idea has been to try to gather small items of "news", if you like, from each area and section of our organization with the object of keeping everyone abreast of recent developments, innovations and achievements.

Until recently, Inspectors were asked to provide this information, but with recent administrative changes, the system was altered and O.I.C.s of each Division or section (including Head Office) were requested to help. Of note is the fact that excellent response was achieved, Head Office being a notable exception.

The next issue of Forest Notes is scheduled for December 1973. Material for editing purposes must be in my hands by mid-November (exact date to be advised). I would like to see a concerted effort made to improve intra-Departmental communications through the medium of our journal and request co-operation from all sections, particularly Head Office!

R.J. Underwood  
Editor

ISOLATED BANKSIA GRANDIS DEATHS ON ROADSIDE  
DWELLINGUP I.M.U.

by

R.J. Kitt

A recent survey conducted to locate the cause of an alarmingly high number of isolated *Banksia grandis* roadside deaths within the Dwellingup Intensive Management Unit (I.M.U.), revealed that *Phytophthora cinnamomi* was associated with almost 50% of dead *Banksias* sampled.

All major roads within the I.M.U. were included in the survey. Samples were taken from 35 recently dead *Banksias* occurring singly along the roadside. Soil to a depth of 15 cm. surrounding each dead tree was sampled, lupin baited, and the radicles subsequently plated on antibiotic agar. In addition, tap and lateral root sections were taken, macerated, and the particles directly plated on antibiotic agar. Following an incubation period, all plates were inspected for *P. cinnamomi* colonies.

*P. cinnamomi* was detected in 29% and 42% of plates for lupin baiting and direct plating respectively. By grouping the two methods, 46% of all *Banksias* sampled yielded a positive *P. cinnamomi* recovery. *P. cinnamomi* becomes increasingly difficult to detect as inoculum density is reduced, therefore, it is reasonable to assume that this percentage may be considerably larger.

Deaths occurred on all topographical situations, predominantly within good to high quality jarrah forest. In the majority of cases, the ground cover consisted chiefly of *P. cinnamomi* host species. The height of the dead *Banksias* ranged from one to 10m.

As it has been established that *P. cinnamomi* is the organism primarily responsible for jarrah dieback, it follows that the end result of these new infections will be irreversible destruction of the total forest in the area surrounding the infection. This will occur in all cases as *P. cinnamomi* will survive as chlamydospores (resting spores) within the *Banksia* root tissue while soil conditions are unfavourable for germination and spread. In fact, in a number of the above infections, the fungus was isolated from tap roots up to 10 cm. in diameter during the dry, hot, late summer months. As soon as optimum levels of soil temperature and moisture are reached (during spring and autumn) fungal populations will increase and spread to nearby hosts where new infections will occur.

In addition to single *Banksia* deaths, a far greater number of established dieback patches of varying size have been recorded along these same roads. The situation is depressing, and, as there is some evidence that it is repeated in other Divisions, it is extremely important to establish why these outbreaks have occurred. It is logical to conclude that the answer lies in forest hygiene. Hygiene rules must be enforced, not only by Departmental personnel but by all parties relevantly concerned. It may be necessary to devise new rules and apply more strict supervision if future dieback outbreaks are to be reduced to an absolute minimum.

The survey also revealed the variability of dieback incidence in relation to roads. For instance, there were eight new and twenty seven established infections along Duncan's Road, while there were no new and only three established infections along George Road. It was observed that continuous dense *Banksia grandis* understorey was a characteristic feature of the forest along Duncan's Road, while infrequent, small *Banksia* patches only, occurred along George Road.

Although, on George Road infections may exist but have failed to be detected as disease symptoms have yet to be expressed, there appears, from the above observations, to be a strong correlation between the number of dieback infections and the incidence and density of *Banksia grandis*. As *Banksia grandis* is the most readily infected in addition to being the most susceptible host species within the jarrah forest, it follows that any practices designed to reduce the *Banksia grandis* component within the northern jarrah forest I.M.U.s, particularly along roads, would be highly desirable.

### MANJIMUP'S FORESTRY CRICKET TEAM

A new cricket team entered the Warren Cricket Association this past cricket season - calling themselves "the Forestry" side - with the team made of mainly Manjimup Forests Department staff - including Divisional, Working Plans and Research, and outstations such as Tone River, Nyamup and Donnelly River, along with some mill staff.

Nominated into the competition by former Dingup player, Bruce Harvey, the side showed plenty of spirit but little skill in the early matches. With the loss of Rick Sneeuwjagt to U.S.A. for study the side struggled against the more experienced sides. However, the true forestry spirit showed through, and as well as being a very successful social season the team went on to defeat the top team, Dingup, convincingly in the final match of the year.

Finishing fourth in the six team competition in their first year was a creditable effort.

John McKenzie (President) presented the batting trophy to Bruce Harvey (378 runs for an average of 27.0) and to Graham Liddelow (for a bowling average of 11 runs per wicket) at a wind-up dinner.

All 24 players who took part during the season in representing the Forestry team agreed that the sport provided an interesting and social weekend past-time during the long fire season.

The Forests Department is well represented in the cricket scene in the Warren District. The Association committee consists of:

President:	Steve Quain	(Regional Superintendent)
Secretary:	Bruce Harvey	(O.I.C., Working Plans)
Treasurer:	Bob Smith	(T/A, Fire Research)

As well as enjoying an interesting cricket season, the whole Forestry Community joined in supporting the Social Club which put on some very successful barbecues, and a Christmas Family Show featuring Father (Gobby) Christmas.



Features of the cricket season included:

- T. Brittain knocking a Pemberton batsman onto his stumps with a body-line bowl.
- Bob Smith dropping both his cigarette and the catch.
- Chris Vellios hitting Dingup's Steve Quain for two consecutive sixes.
- Bruce Harvey taking 14 wickets in one match.
- Rod "Boomer" Simmonds run-up that made Dennis Lillee look like a learner.
- Captain Bill Buchanan's great guidance and wicket-keeping effort during the season.

The team is confident of an even better season next summer, both on and off the field.

## KARRI THICKETS, BEFORE SETTLEMENT

by

L. Talbot

In his recent article "Plant Succession and Past and Present Burning in the Karri Forest" (1), P. Christensen states "The reports of early explorers and settlers seems to indicate that the karri forest had an open understory at the time of settlement". H.D. Evans made similar claims in "Pioneering in the Karri", (2). I have read the journals, diaries and some letters of several explorers of the karri region and in none of them are such claims made. In fact, the opposite is usually the case. There is certainly a widely held belief amongst people of the South-West that the karri had an open understory before Europeans arrived in the region, and it is generally held that the reason for this was that the natives burnt the bush as often as it would burn. I am convinced that these beliefs stem from inaccurate folk law rather than from fact.

From the writings of early explorers, officials and settlers the following points concerning the karri forest and the Aborigines of the area would seem to emerge:-

1. Dense thickets were widespread throughout the karri forest; though perhaps not so dense as is now the case.
2. The Aborigines appear to have had a dislike for the karri thickets and avoided them.
3. It would appear that all but a few of the Aborigines may have been absent from the karri region in the summer months when the karri would burn freely.
4. The Aboriginal population of the region was an extremely small one.
5. The karri forest was most certainly not burnt as often as it would hold a fire.

Examination of early writings provides evidence to support each of these five points.

1. Dense thickets were widespread throughout the karri forest though perhaps not so dense as is now the case.

The first explorer to travel through the karri forest seems to have been Captain J. Bannister who in 1831 led the first overland party from Perth to King George's Sound. As the party neared Albany the navigator, a Mr. Smythe, thought that they were too far East and altered course in a South-Westerly direction. This course took them across the Frankland River in the vicinity of Mt. Mitchell onto the coast near Cape Chatham. They experienced considerable difficulty in forcing their way through the thickets both in the karri forest and in the surrounding jarrah country. Bannister (3) described the thickets as being so dense that they could make their way only by cutting a road with their hatchets. On one day they made only three miles and later Bannister was to write that they could make only 7 or 8 miles in two days "though we toiled the whole day". The following extracts from his journal and reports give further proof of the existence of extensive and dense thickets between Mt. Mitchell and Cape Chatham".....for 3 miles an almost impassable wood of mahogany and underwood."  
".....and a great quantity of underwood."  
".....very difficult to force our way through the bush".  
".....the country thickly wooded and much encumbered with underwood for 5½ miles.  
".....underwood and scrub above our heads, almost impossible to pass,.....".  
"The underwood 15' or 20' high; to break this was impossible in many places, our only remedy was to make a road,....."  
".....and as usual when we found the blue gums of any size an almost impenetrable thicket.....".  
"After John Galway and I had made a path through the thick underwood with great labour for nearly 9 miles, he returned for Mr. Smythe and as soon as he was able we proceeded through the same kind of country for three miles.....".  
"The land appears to be a good brown soil but it is so encumbered with fallen trees and underwood that we could scarcely judge".

In 1841 William Nairn Clarke (4) made an expedition in a whale boat to Nornalup Inlet and Broke Inlet and explored the lower reaches of the Deep and Frankland Rivers, making short excursions on foot into the surrounding forests. Clarke has left some very detailed descriptions of the country and like Bannister he found much of it covered in dense high thickets. He wrote in one instance of an "absolute thicket of wattles about 25 feet high" and in another describes how his party found their way back to the boat "through tangled thickets high above our heads with no other guide than the compass".

In April 1845 A.C. Gregory (5) attempted to trace the Gordon and Frankland rivers down to Nonalup Inlet but between Mt. Frankland and Nornalup he lost two days trying to follow the winding river through "almost impenetrable thickets" and was forced to abandon the attempt and be satisfied with having discovered that the Gordon and Frankland were one river.

In May 1852 Gregory (6) was again exploring in the karri country this time journeying down the Donnelly River to its mouth along the coast to Broke Inlet and then North-east and north to the upper Warren. On this journey he was obliged to leave the valley of the Donnelly River because of the steepness of the country and the "almost impenetrable thickets". From the mouth of the Donnelly he attempted to examine the country eastwards but found it "impassable" and was compelled to follow the coastal sand hills. After crossing a bare tract of drift sand nearly 40 square miles in area (the Yeagerup Dunes) he reached the Warren about three miles from its mouth. Six miles up-stream from the mouth of the river he again encountered dense thickets. Here he met a native who gave a most unfavourable account of the country to the north east, so he continued parallel with the coast through swampy plains covered with high scrub with patches of "blue gum and mahogany forest with dense thickets". Near the Gardiner River he described the land as being "bad and scrubby". Travelling north east from Broke Inlet he passed through "hilly country timbered with mahogany and blue gum with coarse scrub and thickets of underwood interspersed by open streaks of black peaty land full of springs and covered with high scrub" until reaching a small river he believed was a branch of the Warren.

Alfred Hillman (7) explored along the coast between Albany and Nonalup Inlet in July 1833. He does not appear to have entered the main karri forest but he did pass through some very dense thickets near Parrys Inlet while traversing a patch of karri bush there.

### Conclusion

From the writings of these explorers it cannot be disputed that dense thickets were widespread throughout the karri forest before the first European Settlers arrived in the area in the late 1850's and early 1860's.

2. The Aborigines appear to have had a dislike for the karri thickets and avoided them.

The country north east of the mouth of the Warren (i.e., west and south of the present township of Pemberton) is the heart of the karri forest and it is obvious that the native Gregory met near the mouth of the river had a poor opinion of the region. He was able to convince Gregory that it was better to travel along the coast than to venture inland there.

In 1829 a Dr. Wilson (8) explored north-westward from King George Sound, and near Mt. Lindsay he met a native who was known to his own native guide "Mokare". When this man heard that Wilsons' party intended travelling westward and then to return to Albany along the coast he advised them not to as travelling was very bad in that direction. He invited the whitemen to accompany him eastward where the best land was and where the rest of his people would be waiting for him.

On a second expedition to Nornalup in May 1842 Clarke (9) met a party, or as he described it "a tribe" of 13 aborigines on a creek running into the Frankland. He found them most friendly and they offered to conduct him to a district "far away where there was chaylup (i.e. grass) plenty, and no trees".

### Conclusion

It would seem therefore then that the natives preferred the open grass land and held a very poor opinion of the scrubby karri country. This view is further strengthened by the fact that all reported encounters between explorers and natives mentioned here, occurred between the forest and the coast, with the possible exception of Clarke's meeting with the group of thirteen. Hillman also met a small party of natives on the coast near Warren Inlet and Lieutenant Preston (10) who in April 1831 while travelling along the coast in a whale boat from Albany to Point D'Entrecasteaux called in at Nornalup Inlet where he met some natives and though he did not say how many, it seems it was not a large party. He met another native near Point D'Entrecasteaux from where he also saw several fires along the coast. Bannister saw three native men near the mouth of the Frankland River and a family of three a few miles further along the coast; but the three explorers who travelled within the karri, Bannister, Clarke (twice) and Gregory (twice) met no natives there at all, neither did they mention seeing any native camp sites or any other sign of them within the forest. When Clarke met the 13 he was returning overland from Irwin Inlet to where he had moored his boats on the Frankland River. This meeting could have occurred within the karri forest perhaps, but it seems likely that it also took place along the coastal plain.

3. It would appear that all but a few of the Aborigines may have been absent from the karri region in the summer months when the karri would burn freely.

There are several early accounts which state that in summer the natives from the inland, along with coastal natives, spent the summer months on some of the estuaries along the west coast and round King George Sound. Hammond (11) gives a detailed account of this in "Winjans People" and Nind (12), a surgeon at Albany in the first years of the settlement there, gives a very detailed account of this occurrence at that place.

Hammond claimed that in the summer months, natives from all over the south-west travelled to meeting places on the estuaries near Mandurah and that they were joined there by tribes from the east and north. They lived mainly on fish. At this time old scores were settled, new laws made and the necessary ceremonies were held. Nind states that the coastal natives went inland in the winter and began to return to the coast in September and October and that by about Christmas they began firing the country, and then they gathered in great numbers on the coast around King George Sound.

Most explorers along the coast between the Murray River and the Vasse encountered natives in varying numbers at all seasons of the year, but especially in the summer months when groups of 100 or more were frequently encountered. The same seems to be true of King George's Sound. And yet Bannister met only six near Nornalup Inlet in January, Clarke did not meet or see any at all on Broke or Nornalup Inlets in February and March and neither did Gregory see any on Broke Inlet in May.

Surely if there had been a native population in the hinterland of these two inlets such people would have followed the same practice as the natives of the west coast and King George Sound and lived on the abundance of fish to be had from the inlets in the summer and autumn months and therefore would have been present in fairly large numbers at the time those explorers were in the area.

Possibly another indication of the lack of Aboriginal use of the karri forest is that the explorers made no mention of seeing or using any man-made foot pads there. Other explorers made use of such pads whenever they were able and, Bannister too, followed one into Albany towards the end of his journey. Such pathways would have made travelling through the karri thickets so much easier and had there been any it is almost certain one or more of the explorers would have mentioned them.

My grandfather, who was born at Nannup in 1879 and lived there all his life, often told me of the "Blackfellow" travelling up from the south and camping for a while on the bank of the Blackwood at Nannup on their way through to the Busselton District. He referred to them as the "Donnelly River Mob". According to him, as they travelled they burnt out the thickets to hunt quokka, and the smoke from these fires could be seen for several days before the natives reached Nannup. When they were leaving Nannup it would take them about half a day to clear the camp. The first group would leave early in the morning and the stragglers would not get away until about midday. This suggests that these were comparatively large migrations, and not just the usual family group travelling about in the usual manner within their normal tribal country.

H.D. Evans (2) has written that in 1912 the remnants of the Warren people were moved to Busselton. All this may imply some connection between the Warren-Donnelly group, or groups, and the Busselton District. If this was so it is likely that during the summer months these people travelled to the estuaries around the Vasse to meet their kinsmen and to participate in the necessary ceremonies etc., as Hammond has described. It is possible too, that the few natives seen around Broke and Nornalup belonged to this group and if so, this may explain the absence of natives from the southern estuaries in the summer months.

4. "The Aboriginal population of the karri region was a very small one"

There is ample evidence in what has already been discussed here that the population of the area was a very small one. The largest number of natives mentioned by any explorer is 13, whereas in the Perth, Mandurah, Kojonup and Bunbury areas parties of 60 to 100 were met by explorers and meetings with smaller groups occurred far more frequently than was the case around the karri country and the adjoining coastal strip.



Early attempts to take a census of the Aboriginal population were confined to limited areas but in the 1857 census an attempt was made to count all natives in contact with settlers. This census (15) showed that there were 3,597 natives in touch with settlements from around New Norcia to the South Coast east of Albany. As the first settlers had only recently arrived in the karri region (Deeside 1852 and Lake Muir 1856) it is unlikely that an accurate count was obtained in that locality. However, as the karri appears to have been about the most sparsely populated parts of the south west and the census showed only 828 natives in the Perth-Swan and South West districts, it is evident that the population of this area was a very small one.

Meachem (13) has written "There were never many aboriginals in the karri, (no more than 100 has been suggested)". I have found nothing in early writings that contradicts that statement. My grandfather's account of the departure of the natives from Nannup may give the impression of a very large number but a group of from say, 50 to 100, leaving in small family groups could fit this description.

5. "The karri was not burnt as often as it would hold a fire".

The descriptions of dense undergrowth given by Bannister, Clarke and Gregory are proof enough that the karri was not burnt as often as it would hold a fire and if it is accepted that the evidence presented here is proof that the natives were absent from the karri in the hottest summer months, then this is a further strong argument against such belief. If such absence occurred in the January-March period this would roughly co-incidewith the present prohibited burning season and as Meachem (13) has shown there is a "frequent impossibility of burning during the limited period available in Spring and Autumn. A mean of 18 days in Spring (up to January 15th) and ten days in Autumn, (after March 15th) an average total of 28 days, (range from 15 to 40 days) is available for controlled burning in the karri region". Obviously then, if the natives' absence extended into the Autumn period after mid-March the number of burning days would have been reduced even further. It is likely then that in some

years none of the forest was burnt at all, but in years of hot dry Autumns extensive and severe fires would have occurred.

None of the explorers mentioned refer to burnt bush in the karri forest though reference to recently burnt bush and the effects of fire on the country occur frequently in many accounts of exploration in the south west.

There can be no doubt that fires did occur in the karri forest, caused by lightning strikes or native fires from outside the region travelling into the karri and, no doubt, by the natives themselves when they were present in the areas in suitable seasons. Churchill (15) has shown that fires severe enough to truncate the peat, occurred in the area over 5,000 years ago. However, at the time of contact the forest was not burnt as often as it would burn.

What then of the popular belief that the karri had an open understorey and that the natives burnt the forest as often as it would burn? Is this belief completely wrong? Probably not. It seems very likely that this description of the karri may have been accurate of some parts of the karri, especially some years after first settlement.

As European settlement expanded the Aborigines found their traditional camping places and ceremonial sites occupied by white men, much of the land cleared, vegetable foods destroyed, game shot out or scared off and made timid by dogs and guns. Grass and herbage, on which much of the game lived, was eaten out by the white man's stock. In some cases the natives were driven by force from their own land.

Introduced diseases decimated their number time and again, tribal law broke down and the people became dispirited and disorganized. Hammond, describing this phase of aboriginal life, said that they then stopped travelling about the country and settled themselves in small groups on the outskirts of towns and around properties on what had been their traditional tribal land.

During this phase they would have continued at first to live mainly by hunting but gradually becoming more and more dependent on the white settlers. It seems likely that while they continued to hunt they would have fired the bush and as they now covered a smaller area and remained in that area constantly the bush is likely to have been burnt as often as it would hold fire. No doubt it would then have been possible to ride for miles through these sections of the karri.

The children and grandchildren of the first settlers may have grown up in this period and when later they became the "old-timers" so often quoted as the authority for the open understory, regularly burnt theory, that is how they would have remembered it.

Even as late as the 1920's surveyors and other bush workers reported widespread dense thickets in the karri and it seems likely the burnt open country was confined to the vicinity of properties and stock routes where the settlers themselves continued to keep the bush burnt even after the natives had died out.

Nevertheless the first settlers are certain to have found sections of the karri free of undergrowth though this situation may have been only temporary and due to recent fires. Bannister observed that where the undergrowth was not exceedingly thick good grass and herbage abounded; and Evans (2) says that Brockman was attracted to the Warren by the abundance of grass and absence of poison plants.

This last point is very interesting because, according to Evans, Brockman first settled six miles lower down the Warren than where the present historic homestead stands. This is close to the coastal edge of the karri and very near the place where, nine years earlier, Gregory turned back after encountering high dense thickets and having heard the native's report of the country further inland. It is possible that this

area had been recently burnt when Brockman first saw it so that there was then a good growth of grass and low herbage. Gregory described the Warren between the coast and the karri as having good grassy though narrow flats and it may have been this that attracted Brockman. It is interesting to note that Brockman later moved deeper into the karri. Could this have been because as a result of his burning the country around this new selection became good grass land, free of thickets?

Considering that dense thickets were prevalent in the karri, it does seem reasonable to assume that periodic severe fires were natural to this forest before the coming of Europeans. I would not attempt to guess how frequently - or infrequently - such fires did occur but it seems certain that fierce fires must have been part of the karri environment.

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The C.S.O. papers and the originals of the "Diaries of Exploration" are held in the Battye Library, Perth, and I wish to thank the Chief Librarian, Mr. Sharr, for permission to use this material.

F.D. 153 - A MARITAL PROBLEM

by

N.G. Ashcroft

Most Officers will have had cause to grin when reading an F.D. 153 (Particulars and Record of Person applying for Employment) filled out by an applicant with less than an average grasp of the English language.

I recently had cause to flip through the file and in so doing received a refresher course on the interpretation of Marital State. It was interesting to discover the types of marital state other than married or single available nowadays. These included:-

- 'NOT'
- 'NONE'
- 'WEST. AUSTRALIAN' (he might have thought the word was 'martial')
- 'MALE' (I wonder does he have one or does he want one).
- 'VERY GOOD' (He was single - it probably couldn't be better).

It is also worth noting that the authors of the above were all single and therefore have no one to tell them what they are (!) No doubt a skip through your files will show a few more varieties of Marital State. You will probably also discover more about other attributes such as Eyesight; for example blue, brown and indifferent.

THE FOREST ASSISTANT

by

"Anonymous"

The main function and qualification for a Forest Assistant is that he should have the ability to read. The things he must be able to read are various but mostly he must read:-

The small print everywhere  
The meaningless letters from everyone  
The illegible scrawls from everyone  
Between the lines of everything  
And most important of all MINDS

Apart from reading he must without training or information, be able to inform all men on all subjects from septics to silviculture, high pruning to high finance and the Forest Act to the Dog Act.

His bible must be the Forester's Manual, his tools the pencil and eraser and his protection a glib tongue and a ready apology. He has to be a messenger to wives, a comrade to workers and a jack-of-all-trades to the D.F.O.

He must endeavour to be an accountant, a fireman, a forester, a secretary, a librarian, a draftsman, a landlord, and a friend.

In other words all things to anyone and yet seems to be regarded as nothing by everyone.

## REGIONAL NOTES

### EXTENSION SERVICES

#### Trial Horse Riding:

A new sport to Western Australia is expected to grow rapidly, according to horse lovers. Trail riding on horse back is now well established in the Eastern States and the first W.A. club - "Swan Trail Horse Riding Association" has been formed. The first club ride was held in John Forrest National Park on July 15th 1973.

#### W.A.M.C.A.

A federation of sporting motor cycle clubs has been formed to co-ordinate the use of sporting venues by member clubs. Called the West Australian Motor Cycling Association it represents 9 city and 9 country clubs, and its liaison officer Ernie Serls is likely to be a regular visitor at Divisional offices in the next few months.

#### Bibbulmun Track

Work on preparation of the Bibbulmun Track (part of the proposed Perth-Albany) is well advanced and the Kalamunda-Northcliffe section is expected to be in use before Christmas 1973. On the 17th June a party of 30 bushwalkers, scouts, guides, speleologists and foresters checked out some portions in the Kelmscott Division and the route selected was very well received.

#### COLLIE

##### Staff:

Tom Mavric retired on 16/7/73 after 46 years of service. A farewell celebration was held at the workshop and many of Tom's forestry and sawmilling associates attended. Tom was visibly moved by a presentation of a replica of his marking axe (magnificently restored and mounted on a wall plaque), by lifelong friend and workmate, Dinny O'Leary.

John Kruger and Russell Tate will transfer to Busselton on 27th August.

##### Sport:

Bob Brierley, Charlie Broadbent and Don Spriggins have all



carried off trophies from the Collie Golf Club in recent weeks.

Merrilyn Kearney was selected in State Junior Country Women's basketball squad.

Christine Bebbington excelled in Country Week netball.

Alan Walker was selected in S.W.F.L. squad for Mobil championships.

Arthur Tooby is in training for Australian Wrestling Championships in October.

Max Rutherford has his horse "Maximan" back in training and is hoping for big things from him in the coming trotting season.

General:

The Muja powerhouse is to double intake of Collie coal by 1980. Alwest is to use Collie coal in its proposed bauxite refinery. Both of these moves will mean a big population increase in Collie in the next few years (Estimate 15,000 by 1980).

A preliminary survey of deep sands in the Collie Coal Basin has indicated that large areas of sands may be available for pine planting in future years.

Heavy rains filled the Wellington Dam in a very short time and the dam overflowed before the end of July.

#### WORKING PLANS

W.P.O. T/A's established I.M.U. Plots on Preston Block at the highest sampling intensity yet carried out (0.35%). The results appear to be excellent. One crew has started, in the Mullalyup Block, another I.M.U. project on the grid system to provide a comparison with the plot selection system.

T/A Miss Collins went to Perth for the Country Week Hockey Carnival.

A.D.F.O. Harvey fresh from his successful cricket season has taken up golf and won numerous trophies including the coveted King Karri Cup at Pemberton. Rumour has it that he has been kept well stocked at the 19th hole.

Manjimup W.P. have become heavily involved with the revision of the Wood Chip Working Plan and are working closely with the Research Section.

#### WALPOLE - MANJIMUP

The Divisional staff in Walpole and Manjimup have been under pressure due to leave commitments of various officers. They have travelled to Darwin, Dampier and all points north, no doubt to escape the coldest and wettest winter for some years.

F/A Gerrit Gerlach of Walpole resigned and was replaced by Peter Fishwick, a keen sailor who will make good use of the Inlet - Welcome Peter.

Whittakers are hauling logs from Keystone Block near Walpole to their mill in Greenbushes, a total distance of some 174 km or 108 miles. Two trucks each do two trips per day of about 22 cubic metres or 15 loads per trip. This regular hauling distance must constitute a West Australian record.

It was of interest to note that the Karri plantings of last year stood up to the severe drought conditions experienced in summer. Better in fact than most of the native scrub species on the same sites. Although plant growth was somewhat retarded the percentage mortality was very low indeed.

#### DWELLINGUP

Miss Lynne Grogan transferred to the Como office in March. She was replaced by Miss May Maarfatia.

The Forestry cricket team had a win this year in the annual match against the Pinjarra Rotary Club team.

The Forests Department Logging Project has recently acquired a new 180 H.P. skidding unit (Clarke Ranger 668B).

The Forests Department Mill in Dwellingup has recently increased its output by about 50% - to 11 loads of sawn timber each day. This has meant employing an additional 5 men in the mill.

A four day Forest Assistants' school was held early in July. The F/As received a very broad training programme. It included a session from the local forestry team on how to throw darts.

#### MUNDARING

Andy Selkirk went on Long Service Leave in March due to family illness and was relieved by his eldest son Bob who had just completed "Nashos". Bob later transferred to Como office to work with Fire Control Branch.

Frank "Legs" Mersch, who joined Mundaring in December 1972, commenced selection of the first section of the Perth-Albany walking trail at Kalamunda, and was last heard of at Harvey, proceeding south.

Mundaring recorded a record Divisional Drought Index of 767 on 10th April this year - can anyone top this?

Severe frosts in June defoliated a high percentage of Eucalypt Planting.

Thirty six hectares of second rotation establishment in Darkan Plantation has been completed. As part of the preparation work involved the large scale ripping out of old pine stumps, this area will be of considerable interest over the next few years.

#### WANNEROO - METRO

##### Staff

Ted Cracknell is enthusiastic about his return north to take the forester's job at Gnangara since it enables him to indulge his penchant for expensive crayfish dinners. Peter Staley meanwhile now conducts his operations from Wanneroo with a licence to venture into all plantations in the metro area and north of Perth. To gird himself for this new position he is taking 3 months long service leave.

The Wanneroo matrimonial bureau has recently matched our second office girl, Glenise, with another member of the prominent Gallagher family. As there is one bachelor member

of this clan left we advise our single southern sisters to be vigilant (or virginal) and apply should a position in this Division become vacant.

#### General

Gnangara fallers co-operative butchers who fall upon and slaughter stray pigs which they discover in the pines are puzzled. They find it illogical that these beasts are poisoned wholesale in some areas while they face criminal charges for their practices here.

About 1900 acres of P. pinaster and 500 acres of P. radiata were planted this year in record time. The technocrats meanwhile have developed an automatic device to apply super-phosphate so that only one instead of two men is now required in each planting machine.

Forest giants grown at Somerville are now being transported south to the Harvey pine mill, presumably to compensate for the paucity of the local product. A new record for production from northern plantations was set in the last financial year. Wanneroo produced 16,800 loads and Somerville 6,000 loads.

#### NANNUP

##### ' Nannup Golf Day '

July 22nd once again saw honest golfers have to battle the shark infested fairways of the Pineridge Golf Club at Nannup.

The weather was reasonably kind and the day turned out a success despite earlier threatening rain. Attendance was approximately 120 (including kids) and we hope it keeps up this way in the years to come.

Alan Hill, the originator of the Nannup Golf Day, donated a trophy for the best Husband/Wife combined score. This is to be known as the Founders Trophy and will become an annual event. It is hoped that Alan's example might be emulated by others as there is plenty of room for donors.

The men played an 18 hole Stableford and the women played a 9 hole event. The results are as follows:

Men's Winner	Noel Ashcroft	36 points.
Men's Runner-up	Alf Wetherley (Count back from Roger Underwood and Charlie Broadbent).	34 points.
Most Honest Score	Phil Bryant	Classified information.
Niggerhead Teams Trophy	Nannup (from Harvey with 117 points).	119 points.
Women's Winner	Pat Phelps	18 points.
Women's Runner-Up	Evlyn Hill	15 points.
Founders Trophy (Best Husband/Wife Combination)	Pat and Neil Phelps	48 points.

It appears from these results that local knowledge could have been of some advantage. Nannup prefer to think that it was sheer golfing ability that held them in good stead.

Finally the organisers would like to thank all those who came and helped to make the day a success and we hope to see you all, together with as many extras as possible again next year.

#### PEMBERTON

##### "Hair"

Rumours that a special "PHOSCHEK SHAMPOO" has been requisitioned for certain professional officers in the Pemberton area for the coming fire season are definitely false.

##### Strong Work

The special skills of Forest Ranger Ian Scott were recently called upon when the Department was asked to remove a huge karri hollowbutt leaning over the Pemberton Trout

Hatcheries. Using his beach fishing rod "baited" with a sparkplug, Ian managed to cast a fishing line accurately through the upper branches of the tree, some 50 m from the ground. This allowed a thin rope and eventually a steel cable to be drawn up and made fast. Local strongman Colin "Draughty" Hunter was attached to the other end of the cable and the tree pulled off its lean and to safety some 20 metres from the Hatchery front door. It should perhaps be mentioned that Colin was driving a D6 at the time.

### Safety

Special mention needs to be made of the outstanding personal safety record of Pemberton overseer Stan Bamess. Stan has not suffered a time-loss accident since joining the Department some 22 years ago; a remarkable effort considering the nature of his work in such a dangerous environment as the karri forest. One wonders how many other individuals in the Department have also achieved excellent personal records and whether some personal merit award should be made to them.

### "Muirillup Farms" Project

June 1973 saw the completion of the major part of the Muirillup Farms project at Northcliffe. This project involved the planting of eucalypts (mainly karri) onto the original cleared areas of a series of repurchased Group Settlement blocks. The return of these farms to karri forest is the final irony in a sorry history of land development. They originally carried magnificent karri forest, but were opened for Group Settlement in the early 1920s. Ringbarking was done over the entire area but only 25 acres were "fully" cleared on each block; the rest returned naturally to karri forest. Most of the Muirillup Group was abandoned in 1929-31 but the farms were re-opened briefly after World War II for tobacco growing, and a second series of hopeful settlers broke their hearts in an abortive agricultural venture, and once again the farms were abandoned. The Forests Department purchased a number of properties from the R. & I. bank in the early 1960s and replanting commenced in 1968. The beautiful young karri stands which resulted, are planted across the remains of the old dairies, houses, gardens and fences. As one walks up the rows of sturdy trees and comes across a patch of buffalo grass, a cape Gooseberry patch or a straggling fuchsia bush, one cannot escape a pang of remorse for those whose struggles and efforts are being so swiftly erased. But at least in one way some of these people will be remembered, as each plantation has been

named after an early settler on the Group.

#### Durability of Karri

Butcher Blocks made of karri have survived without deterioration (and are still in use) in a Pemberton butcher shop over a period of nearly 50 years. Thought is currently being given to impregnating karri sleepers with blood!

#### KELMSCOTT

Kelmscott office girl Miss Robinia Raabe has just returned from a month's European trip with the City of Perth Girls Choir, singing in Wales, Scotland, Holland and Austria. The highlight must surely have been the gaining of 7th place in the Youth section of the International Eisteddfod in Wales.

F/G Alan Briggs, recently out of National Service training has returned to Harvey after a stint of office duties at Kelmscott.

This year 50 ha of bauxite planting was done at Jarrahdale. This was mostly with *E. resinifera* but a 4 ha arboretum containing 22 species was also established.

The raising of jiffy pots in plastic trays produced marked improvement in handling, increasing the planting rate to 850 jiffy pots/man/day.

Quite spectacular results were obtained in last years fertilizer trial with Agras 18:18 and Agras 12:52 and further refinements have been made in the trial this year.

The time is coming when towermen will be selected for their ability to put up with crowds rather than solitude. Mt. Dale received 1250 visitors over the Easter weekend - fortunately only a small proportion climbed the tower.

## RESEARCH STATION MANJIMUP

### Staff:

Rick Sneeuwjagt continues his studies in the U.S. Paul Jones is acclimatized in fire research and has found out where the biros are hidden. Tom Leftwich and Andrew Goode are two new members of the staff who commenced duties in the past year.

The engagement of our Lab. Assistant, Jenny Musulin to Graham Liddelow, T/A, was announced this year. They plan to get married early next year.

### Activities:

Of late activities are spread far and wide throughout the State. Paul Jones and his research team have been spending time in the Stirling Range National Park doing preliminary work in fire behaviour. Tony Annels and the Ward boys have been planting windbreaks in the Boxwood Hill area, further east still. Per Christensen and his ecology team have spent time on fauna surveys in the Boranup karri forest and the tuart forest at Ludlow. They seem to have settled to work on the Perup Fauna Priority Area for the winter. The O.I.C. (White) spent some more time in the Pilbara, becoming re-acquainted with *Mastotermes darwiniensis*.

The ecology section will feature in a television programme of about  $\frac{1}{2}$  hour duration covering fauna and flora in the karri forest. The film has been made but we do not know when it will be shown on A.B.C. T.V. We understand it will be one of a series similar to "Big Country".



SAFETY NEWSLETTER

During the year 1972-73 an average of 925 employees and staff working a total of 1,728,577 manhours suffered 45 disabling injury accidents involving a loss of 414 mandays for the year.

Besides these disabling injury accidents there were a further 112 serious injury accidents which necessitated medical attention but did not result in lost time.

The frequency rate, or number of disabling injury accidents per one million man hours worked was 26 and each accident averaged a loss of 9.2 days.

The severity rate which is a measure of the disabilities suffered by the employees in relation to man hours exposed in terms of a million man hour unit was 256 for the year.

Although there has been an increase in the number of Disabling Injury accidents sustained and the total time lost compared with last year's figures, the following summary of accident experience covering the six year period 1967/68-1972/73 reveals that success in reducing the total number of injury accidents necessitating medical attention continues.

YEAR	M.H.W.	D.I.A.	S.I.A.	Total Accidents	F.R.			Man-days Lost	Duration Rate	Severity Rate
					D.I.A.	S.I.A.	D.I.A. + S.I.A.			
1967/68	1,895,600	124	312	436	65	164	230	1701	14	900
1968/69	2,019,568	96	155	251	48	76	124	1738	18	860
1969/70	1,901,020	70	129	199	37	67	104	721	10	379
1970/71	1,808,406	48	158	206	27	87	110	458	9	253
1971/72	1,759,888	40	128	168	23	72	95	275	6	156
1972/73	1,728,577	45	112	157	26	64	90	414	9	239

However, although these figures indicate that outstanding success has been achieved in reducing the incidence of accidents, they also reveal that the job has become progressively more difficult, and to maintain our present record or improve it to the level which is possible calls for a greater co-operative effort and a general acceptance by all that accidents can be prevented.

During the past six years numerous injury accidents have been prevented by the use of protective equipment. Men have escaped serious, if not fatal head injuries, by the use of safety helmets. Safety spectacles have prevented eye injury and possible loss of sight. Gloves have kept hands injury free - the list is long - yet accidents are still occurring due to the failure of employees to wear items of protective equipment which are made available to protect them from the hazards associated with the particular job on which they are engaged.

Continual investigation is made into various types of personal protective equipment to bring comfort as well as safety, but whilst it is not always possible to provide full protection and complete comfort at the same time, surely if we have any concern for our own personal well being, we must accept the fact that it is far better to be somewhat uncomfortable but safe, than to be 100% comfortable but exposed to a hazard which could result in loss of an eye or a bashed in head.

However, if you are one of those workers who are still providing us with examples of the value of protective equipment, perhaps the following letter may be of interest.

It was dug up by President Kenneth Finley of Local 196 of the U.S. United Rubber Workers.

Finley suggests that it might enlighten some workers and their wives if the lady of the household was required to sign the statement before sending her hubby off to work in the morning.

"I hereby authorize my husband to work without safety glasses, safety shoes, hard hat or other safety equipment.

I hereby promise that I, without complaint, will perform the following duties for him if he's crippled or blinded:

1. I will lead him about through the house and yard.
2. I will help him eat and dress.
3. I will describe the scenery to him when we go on our holidays.
4. I will faithfully read to him every night instead of his usual TV.
5. I will faithfully describe to him the way the children's eyes light up at Christmas and tell him all about their graduations and weddings.
6. I will teach him to do the housework so I can be free during the day in order to get a job to support him and the children.
7. I will do all the work around the house and yard that he used to do.
8. I will do my best to teach our little boy how to catch a ball, how to build model airplanes, and how to fish and hunt."

During the past year a number of divisions have maintained an excellent level of safety performance, and congratulations must be extended to the officers and employees who by their support and active participation, are contributing to the overall success of the safety programme.

Special mention must be made of the outstanding safety performance achieved by Collie, Walpole, Research and Working plans, who have now worked accident free periods of 31, 24, 24 and 13 months respectively.

The following divisional summaries covering the periods 1972/1973 and 1962/63 - 1972/73 reveal not only where progress has been made and maintained, but also those areas where positive measures are required if we are to succeed in maintaining the record achieved during the five year period 1967/68 - 1971/72

DIVISIONAL SUMMARY 1972/73

DIVISION	MAN HOURS WORKED	D.I.A.	F.R.
BUSSELTON	117,253	10	85.3
MUNDARING	80,579	1	12.4
DWELLINGUP	116,840	3	25.6
COLLIE	128,923	NIL	NIL
KIRUP	112,406	3	26.6
MANJIMUP	148,543	4	26.9
NARROGIN	25,008	2	79.9
KELMSCOTT	57,556	3	52.1
COLLIER - SOMERVILLE	84,110	3	35.6
WANNEROO	139,601	6	42.9
HARVEY	161,986	6	37
PEMBERTON	104,468	2	19.1
NANNUP	105,716	2	18.9
WALPOLE	57,739	NIL	NIL
CADETS	12,019	NIL	NIL
KALGOORLIE	8,264	NIL	NIL
RESEARCH	80,956	NIL	NIL
WORKING PLANS	36,568	NIL	NIL
HEAD OFFICE	150,062	NIL	NIL
TOTALS	1,728,577	45	26

ACCIDENT ANALYSIS 1972-1973

	FIELD				WORKSHOPS				SAWMILLS			
	S.I.A.	D.I.A.	DAYS LOST	DURATION RATE	S.I.A.	D.I.A.	DAYS LOST	DURATION RATE	S.I.A.	D.I.A.	DAYS LOST	DURATION RATE
1. MACHINERY IN OPERATION	2								1	5	74	14.8
2. VEHICLES AND MOVING PLANT	7	3	39	13								
3. TOOLS HAND	9	4	76	19	3	1	4	4				
4. TOOLS POWER	6	2	7	3.5	1							
5. MANUAL HANDLING	6	5	36	7.3	1	1	5	5	5	2	7	3.5
6. HARMFUL CONTACTS	8	1	4	4	1				2			
7. PERSONS FALLING OR STRIKING	23	11	90	8.1	1				3			
8. OBJECTS FALLING OR FLYING	14	5	34	6.8	1				4	2	17	8.5
9. OTHER	12	2	5	2.5	1	1	16	16	1			
	87	33	291		9	3	25		16	9	98	

AGENCIES OF DISABLING INJURIES YEARLY

	MACHINERY IN OPERATION	VEHICLES	TOOLS HAND	TOOLS POWER	MANUAL HANDLING	PERSONS FALLING OR STRIKING AGAINST	OBJECTS FALLING OR FLYING	HARMFUL CONTACTS	OTHER	TOTAL
1959/60	1	1	26	NIL	30	53	55	3	8	177
1960/61	8	5	29	2	38	43	45	13	5	188
1961/62	2	11	14	10	46	39	45	13	8	188
1962/63	3	8	25	5	42	48	51	15	3	200
1963/64	3	4	18	6	29	49	38	17	8	172
1964/65	1	12	18	7	38	50	38	11	6	181
1965/66	5	7	28	7	25	62	34	6	5	179
1966/67	2	9	29	13	35	51	39	5	4	187
1967/68	3	4	14	7	30	19	31	14	2	124
1968/69	6	4	9	3	27	15	13	15	3	96
1969/70	3	10	7	6	17	10	10	4	3	70
1970/71	2	2	4	4	5	16	11	2	2	48
1971/72	1	2	6	3	7	13	8	-	1	41
1972/73	5	3	5	2	8	11	7	1	3	45