THE GRANITE BELT NATURALIST

MONTHLY NEWSLETTER OF THE STANTHORPE FIELD NATURALIST CLUB

P.O. Box 154,
STANTHORPE, Q. 4380

OFFICERS AND COMMITTEE 1982 - 1983

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COMMITTEE	Colin Hockings David Pfrunder Tom Archer Ailsa Wilkinson Lyle Thompson Jean Harslett

MEETINGS - 4th WEDNESDAY of each MONTH at C.W.A. ROOMS at 8 P.M.

OUTINGS - Each SUNDAY PRECEDING the FOURTH WEDNESDAY of the Month.

ANNUAL SUBSCRIPTIONS

Single - $5.00 Family - $8.00

AIMS OF THE CLUB

1. TO STUDY ALL BRANCHES OF NATURAL HISTORY.
2. PRESERVATION OF THE FLORA AND FAUNA OF QUEENSLAND.
3. ENCOURAGEMENT OF A SPIRIT OF PROTECTION TOWARDS NATIVE BIRDS, ANIMALS AND PLANTS.
4. TO ASSIST WHERE POSSIBLE IN SCIENTIFIC RESEARCH.
5. TO PUBLISH A MONTHLY NEWSPAPER.

Minutes of the meeting held at C.W.A. Wednesday 22nd.June 1983.

Present.. 22. Apologies ..3.

The President welcomed all to the meeting,with special mention of those visiting for the evening.

Minutes:-That the minutes be taken as read was moved by Brian Mc.Donagh, seconded by Jean Harslett..... Carried.

Correspondence:-

Inward:-1.Press release (Aust Senate) Senator Col.Mason.
2. Press release (4) from Tourism Parks & Wildlife Python, Quail, Land at Currumbin Creek to N.P.A. and near Caloundra turnoff.
3.Q.N.C. June and July No.134.
4.Darling Downs Naturalist June 1983 No. 350.
5.Richmond Valley Nats June newsletter.
6. Urimbirra back copies sent direct to J.Harslett.
7.Cancer Forum July 25th.
8.Jean Harslett letter thanks re congratulations.

Outward was sent to:-
1.QS re outing and meeting programmes.
2.Mrs.Jean Harslett Congratulations from the club for her well deserved decoration B.E.M.

Moved by Millie Marsden and seconded by Robin Mc. Cosker that the inward correspondence be received and the outward adopted or endorsed..Carried.

Financial Report
Statement to 22nd.June 1983.

May 24th.1983... Bank Credit Balance.....			$98.45
Receipts May 25th..Room rent collection			5.10
			103.55
Payments May 25th Room Rent		6.00	
" "May.Mag.Postage		8.18	
" "May Mag Duplication		5.00	
Postal renewal Registra		20.00	39.18
			64.37

Mrs.D.Archer moved that the credit balance of $64.37 be received and the accounts of June magazine Duplication $6.00 June room rent $6.00 and June Mag. $7.92. Postage be passed for payment seconded by R.Marsden and Carried.

Outing Report:John O'Donnell reported on the successful outing to the Kelvin Falls and Elbow Valley area to which 20 members turned up.Perrott's Gap Falls and the Kelvin Falls were flowing strongly through the gorge with semi-rainforest vegetation, growing in the wet conditions

Next Outing:-
The decision for this outing will be made later and advised through the magazine..SEE STOP PRESS.

NEXT MEETING:-This will be the annual meeting and members a are asked to bring slides for "REMEMBER LAST YEAR." Supper to follow remember a plate.
To assist your memory the outings were July Donnybrook Aug.Through walk San. to Finney's Falls; Sept. ? ; Oct.Campout Demon Creek; Nov.BoonooBoonoo Falls; Dec.& Jan.nil;Feb.Boston Cliffs; Mar.Sundown Campout Glenlyon end;April Hicklings mountains Wallangarra; May cancelled wet; June Kelvin Falls; previous June Wiangaree State Forestfrom which we may not have had slides for July.

SPECIMENS.

A request for someone to identify a bird from a letter to Ed. suggested a Pied Butcherbird,but were invest -igating further.

Aerial photographs were on display of Sundown Natio -nal Park and Jibbenbar area,the latter showing a mystery rock waterhole

BUSINESS Nil. The meeting closed at 8.25 pm.

A most thought provking talk was given by our Presid--ent - John O'Donnell on "Remedies to Negate Erosion".He spoke on his personal experience of trying to overcome erosion in co-operation with National Parks. As soil is a major factor in conducting a profitable industry,it is logical that every care must be taken to get the most from it,and to regenerate it to maintain its viability. Thank you John,and we hope that other landholders will take not--ice and action similar to your project.

YOUR SUBSCRIPTI
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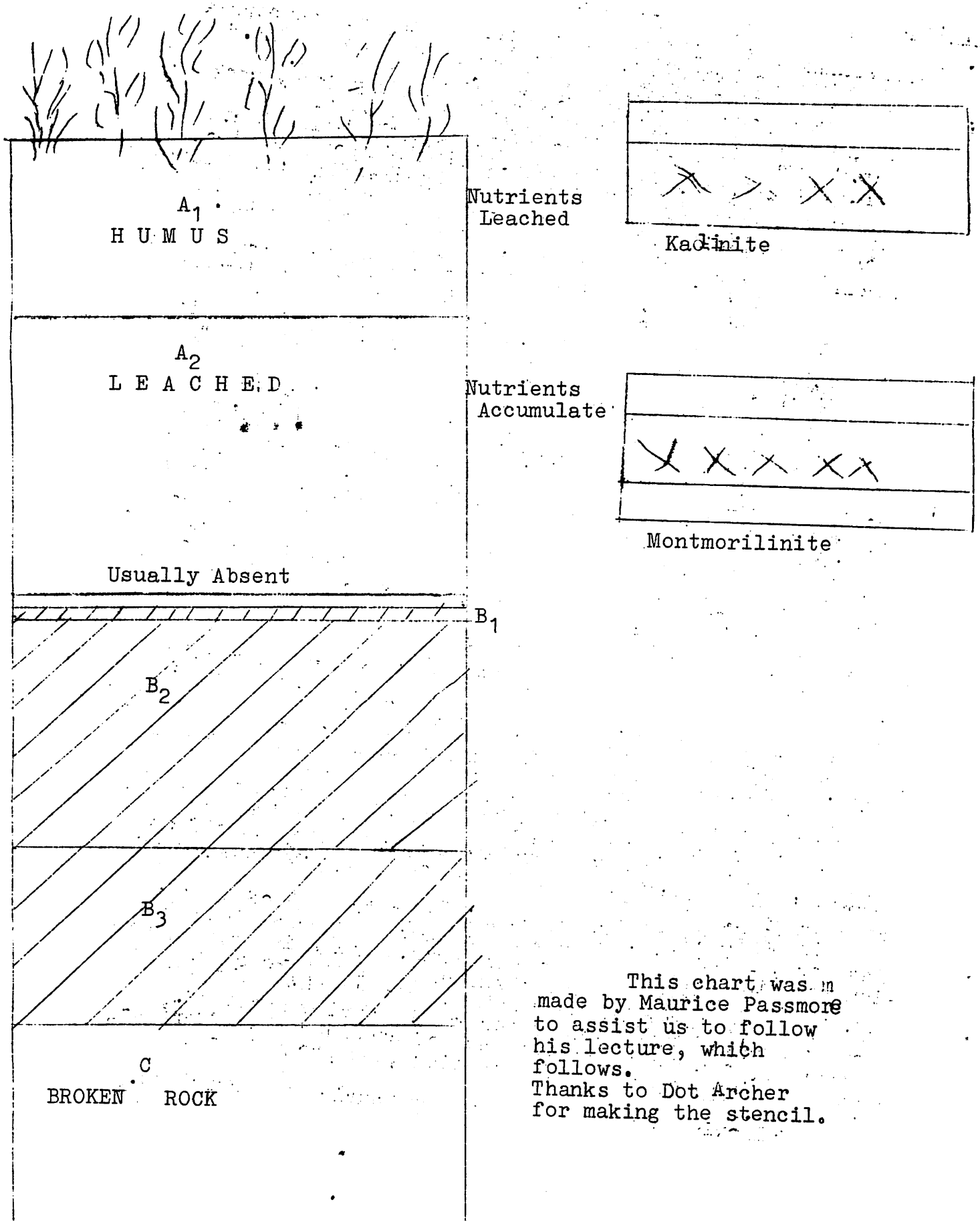
EVENING MEETING PROGRAMMES

Just as we have enjoyed varied outings so have we received inspiration and variety from our guest speakers.We have shar -ed Lakefield Nat Park with experts,Isla Gorge, Sundown Nat. Park,been to Cape York,to the "top tip" and followed the very carefully worked out route by explorer Alan Cunningham as researched by Bill Goebel and the late Mervyn Fletcher, and shared with us by Bill's presentation. A touch of Canada and its national parks and John James introduction to Rural Service Native Conservation Programme,topped off by Maurice's introduction to dirt and John's special subjectof regeneration.

This month we two Guest Speaker reports that of Maurice Passmore,"Pure Dirt" which gave members a special introduct--ion to soil,in good vernacular terms. Having interested us in the real basics,we were given an ideal follow up by John "O'Donnell's "Remedies to Negate Erosion" which dealt with how to respect this very matter which Maurice spoke of. Thanks to both gentlemen who gave of considerable effort to make the subject matter interesting ,and promote some thoughts.

The following chat was prepared by Maurice to assist us.



This chart was made by Maurice Passmore to assist us to follow his lecture, which follows.
Thanks to Dot Archer for making the stencil.

" PURE DIRT " by MAURICE PASSMORE.

The world is blessed with few truely permanent resources and of these the soil is probably the most abused. However th recent drought and the subsequent floods seems to have awaken -ed an interest in soil conservatinn among some of the most unlikely people. It therefore seems that those who are envir -omentally aonscious could benefit from some general informat -ion on soils in general, in order that they intelligently address problems such as erosion and salting that are occur- -ing in rural Australia, on a devastating scale. However bef- -ore doing so,it is necessary to point out that chemicals othe than sodium chloride - table salt - are responsible for salt- -ing, Boron being a major offender.

The soil (excluding the rocks,sticks dead horses etc.)is arbitarially devided into four catagories,chiefly on size. These are sand,loam,clay and humus,and the varying percent- -ages of these in the soil produce its characteristics in texture and structure. Thus our local soils are dominated by inert quartz sands,whilst the black farmlands of the Darling Downs have a high proportion of clay.

The sand is predominantly quartz grains of varying size and principally effect the drainage,aeration and similiar purely mechanical properties. Being composed of virtually indestructable quartz sand is quite chemically inert and thus has no bearing on the fertility.

Loam is usually the smallest component and is principally of partially decayed rock. As such it is thr fertility bank, but it has highly desirable mechanical properties also in binding the soil.

Clay is the finest material and represents the final decay product of the country rock,and it is the key to soil fertility. It falls into 3 distinct types that impart very different characteristics on the soils.

Humus is the decayed organic matter and in all other respects is similiar to clay, but it is,ofcourse, the one over which human control is possible. However it also con- -tains plant nutrients and hormones that can dramatically increase the general fertility.

The three clay types are distinct on the atomic scale, but all can be thought as resembling wafer biscuits. In the Kaolinite group there are two biscuits in the wafer whilst the Montmorillonite group there are three biscuits. The third group of tropical clays ,the Illibes are intermediate and characterised by resistance to erosion and may in fact be an interlaced mixture of mica and montmorillonite.

Our district is charactised by the kaolinite clays, which in its pure form is pottery clay,but is also used for bricks and as filling in high quality paper. The atomic str- -ucture of two layers is strongly bound together, and whilst its actual structure is complex the important point is that it can only hold plant materials along the narrow ends only.

Cont. P.6.

" PURE DIRT "Cont.

Thus soils dominated by these clays are of low fertility and are commonly acid. Humus in contrast can hold humus nutrients right around its edges and its importance to such soils is obvious.

In contrast the montmorillonites are the clays of the High-ly fertile Darling Downs, soils and their most obvious charac-teristic is that they swell and move. The lovely "straight" lines of the fence posts and the dry weather cracks are obvio-us to all, but the 'melon -hole' or gilgai country is equally charactistic.

The reason for this is that water is absorbed between the 'biscuits' in wet times, but of greater significance is the fact that nutrients can also be absorbed, thus reflecting its high fertility.

Soil is more than just a mixture of these erosion products it teams with life. The roots and worms are the obvious inhab-itants, but the soil is really the habitat of the micro-organisms which impart many of its charactistics, It is this group that suffers most from tilliage especially deep plough-ing, but it is mining which proves disasterous. Restoring this soil, fauna and flora is a partically difficult task, when attempting to rehabilitate mining areas.

Finally there comes the problem of classification. If soils are to be grouped in some way for comparison, then it is essential to use some immediately obvious feature. Unfor-tunately it is essential to first " dig a hole " in order to obtain the three dimentional picture.. In many soils there are distinct layers or "horizons" and these serve as a very useful basis for classification and have been named "A" for upper layers from which elements have been leached. "B" for t the lower horizons into which these elements have been de-posited and "c" for the bottom horizon of decomposed rock that overlies the country rock proper. Subdivisions occur in each of these and are labeled "A 1." & "A2." etc. in this case on the basis of humuh and its presence. However just to confuse the issue the "B" horizon is usually abs-ent, and if present consists of a thin layer of hard con-cretions, or hard pan that is characteristic of the Euro-pean podyols found under pine. Of course there are sim-iliar chemical horizons and if one wished to chase up all the variations, you would end up going mad.

However to this point there is a general agreement, but when the process of classifying these future starts, con-fusion reigns. The basic problem lies with the countries where work has been done. The Russians have always beem a major force as have been the Americans. Add to this the ch-aristic European disharmony and the outcome is obvious. The Australian desert soils are fairly unique, so we have had one halfpennie's worth also, but progress has been made, despite it all, and at least there is a common jargon.

Cont.P.7.

PURE DIRT Cont.

Personally I'm loyal to my professor (Prof. Teakle) who did his share of sorting out the problem ,and thus stick to the great soil groups. The idea behind this is roughly (and its pretty rough) parallel the system used for plants and animals and here the great soil group approximates the family.

The local soils fall into the Podzols and are grey podzolus.The grey refers to the colour of the "B" horizon.

In contrast the black soils of Warwick area with no obvious horizions are cherozems (a Russian name). The unique Australian ones are the"grey and brown soils of the desert",and whilst you may not be familiar with them by this name,when they are packed up under your mudguards, in the wet, you will recognised them surely enough.

Muarice Passmore.

JUNE PROGRAMME.... JOHN O'DONNELL on "A CENTURY OF LAND ABUSE".& WHAT CAN BE DONE TO REPAIR THE DAMAGE.

Work being done on "Mountain Park" is an attempt to combine livestock raising with plant,animal & soil conservation.

It was at Charleville,ten years agowhen I first saw & felt the effects of settlement on the land & its creatures.When I came to "Mountain Park" in 1974,I saw thw the same pattern of degradation & decided to do something towards repairing the damage. There was much opposition. Experiments started cautiously in 1978. Some people in National Park & Wild Life Service were aware of the extent & importance of the problem & commenced th theirRural Nature Conservation programme - of monitoring the results of conservation minded graziers,in 1982. Television documentaries,&recently a book - "Wildlife in the Home Paddock" have all helped to increase awareness of the problem,& ways of minimising future damage .

I am also painfully aware that the health of the land is ultimately reflected in the health of the People who live on it

The slides commenced with Dalveen area - showing past & present atrocities -- overclearing,overgrazing,dieback,surface salting,poor pasture composition etc.,familiar sights on most "well improved" properties. Money is probably the most important factor to most graziers & so improvement work done here must be explained in this way, rather than in terms for a feeling for the land.

So, what can be done ?.... Reduced stock numbers means more grass & less trampling & so better rainfall infiltration & usage with lower runoff & smaller flood peaks. This in turn means lower soil losses. Fencing out domestic animals;and brush matting (prickly branches) will allow repair of eroded areas.

The old hands used to say,"that stock improve the country". To-day we find that reduction or exclusion of domestic stock;

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A CENTURY OF LAND ABUSE & WHAT CAN BE DONE IN REPAIR Cont.

allows regeneration of trees & shrubs & a return of the more nutritious grasses. Where tree planting is urgently required transplanting is useful, but expensive. Weldmesh or hingejoint t tree guards are useful in small paddocks, when stock usually eat young trees. After two or three years the guard is removed & put around another seedling.

At the same time, some areas have too many trees & shrubs The axe and mattock are used here to restore balance. Each tre is observed & a decision made as to whether it should be ring--barked, or left. Will it make timber for posts or mill logs, is its nearest neighbour less than 20 metres away, is it a rare tree species ? Ridges are left alone to make windbreakes. creek bank areas for wildlife &aesthetic value. Hot dry north facing slopes are favoured by stock for their "sweeter grasses A thicker tree cover may reduce their attractiveness and sub--sequent overgrazing. Certain trees such as kurrajong & brush box are never rung. Around 5 to 15 trees per hectare are left and a proportion of these would be short lived Acacias. The mattock can be used to selectively reduce seedling density.

Lack of trees and shrubs on catchment areas may result in salt patches, lower down the slope. It used to be good enough to say that "salty" soils are good for horses !". Now fencing off or brush matting are required for affected "salty" areas and the catchment areas requires revegetation.

Vehicle tracks around a property are another source of runoff and soil loss, if the grass cover is destroyed. Driv--ing the vehicle a bit to one side of a worn area will give the grasses a chance to recover. A slide showed an abandonde--ed track about a metre deep. About 100 cubic metres of soil was added, packed down, and the surface strewn with branches and topsoil. The surface has almost stabilised, with grass (a chance to recover) after three years. Speed bumps (with a coating of sump oil to help them last long--er) will divert rain water and reduce soil loss from a track receiving heavy traffic.

Most weeds are introduced plants, gradually taking over the landscape. Around 50 species have been identified at "Mountain Park" in species of trees, shrubs, grasses and pond weed. Years of patient grubbing, handweeding, ring--barking and tractor and cable have reduced weed popul--ations, and allowed the native plants to regain territory. Blacberry is the only species which has been sprayed.

The talk finished with some pleasant views around the property, to remind us that the land should provide us with a way of life, rather than a means to a material--istic dead end.

John O'Donnell.

The outing prior to this talk was led by President John O'Donnell, and was to the Kelvin Falls area. During this outing we were able to see for ourselves, practical

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examples (and feel for ouselves intruders like grass seeds and Mossman River Grass) just exactly some of the problems, John so graphically brought to our attention by his lecture. The warm northern slopes, with problems, and we identified the differences, from the plant populations beneath a fine shady ironbark. (E.crebra) and the slopes and it was most revealing. The days observations were tempered, by lovely falls, glisten-ing waters, valleys, with numerous ferns, telling of shade and gentle coolness, very pleasant scenery and walking over un-dulating hillsides, of soft golden brown hues, so appeasing, yet again inspiring to Australian eyes. A day of good compan-ionship, of interest, of lovely scenes, with just enough of a serious nature for our minds to enjoy a few mental gymnastics, as well as the physical exercise, of our limbs.

Jean Harslett

NEXT OUTING

This will be to "Mount Hutton" Mr. Jack Mc.Beth's property Mr. Mc.Beth and his father before him (as a first World War soldier settler at Amiens) has a keen interest in this dist-rict. He has several features he would like to show us near "Mount Hutton" and adjacent properties, which were all once part of the old property "Nundubbermere"

DATE. Sunday 24th. July.. TIME 9am. at Weeroona Park or 9.15am to 9.30am at Mount Hutton.

To go to "Mount Hutton" proceed along the Pikedale/Texas Road, after passing the Greenlands School carry on for 1½ km. when there will be a turn to the left (marked by a sign with many property names and "Mount Hutton on a seperate board. Go along this road for about 1 km. and Mr. and Mrs. Mc.Beth's home will be the first on the right, and we will meet here. It will be quite new country to, us & Jack, has a great knowledge of the area, as a good bushman, and long time resident, and an understanding of the history too. He is Vice President of the Stanthorpe and District Historical Soc. An interesting day is expect-ed, with some walking and some driving, but only short distances.

Congratulations to fellow club member Jean Harslett, on being awarded a British Empire Medal in the Queen's Birthday Honours List. We are all delighted that Jean has received this recognition for many years of public spirited voluntary work, which she has so gratiously given.

Joan Stevenson Hon. Sect.

YOUR SUBSCRIPTION IS NOW DUE