

THE GRANITE BELT NATURALIST

Monthly newsletter of the Stanthorpe Field Naturalists Club.

NO. 50 JUNE 1974

P.O. BOX 154 STANTHORPE, Q.

OFFICERS AND COMMITTEE 1973-1974

PRESIDENT	Mr. F. Wilkinson
VICE-PRESIDENTS	Mr. R. Leisemann & Mrs. R. Harslett
SECRETARY	Mr. E. Walker (Phone 888)
TREASURER	Mrs. G. Leisemann (Cwlth Bank Bus. Hrs)
EDITOR	Mr. I. Jackson
NEWSLETTER SUB-COMMITTEE	Mr. & Mrs. W. Cathcart
LIBRARIAN	Mrs. Z. Newman
PUBLICITY OFFICER	
FLORA OFFICER	Mrs. D. McCosker
FAUNA OFFICER	
GEOLOGY OFFICER	Mr. P. Higgins
YOUTH OFFICER	Mr. G. Marsden
BUSHWALKING OFFICER	Mr. R. McCosker

ACTIVITIES

MEETINGS	4th Wednesday of each month at C.W.A. Rooms, at 8 p.m.
OUTINGS	Sunday preceeding 4th Wednesday

ANNUAL SUBSCRIPTIONS

SINGLE \$1-50	JUNIOR (Full-time Student) 50¢	FAMILY \$2-00
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PROGRAMMEFIELD OUTING:

Bald Rock

DATE

23rd June

LEADER

F. Wilkinson

MEETING:

26th June

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MINUTES OF MEETING HELD 22nd MAY 1974:

Present 42 Apologies 10

Meeting opened at 8.12 p.m.

MINUTES OF THE PREVIOUS MEETING: Moved by Mr. W. Cathcart, seconded by Mrs. D. Till that the minutes of the previous meeting be confirmed.

INWARD CORRESPONDENCE:

1. Letter from Adult Education re approval of speakers fee for Mr. D. Bluhdorn;
2. Newsletters from other Nats. Clubs;
3. Press release from D.P.I.

OUTWARD CORRESPONDENCE: 1. Advertisement details to Adult Education.

TREASURER'S REPORT: As reported by phone in absence of Treasurer:

Balance b/f	\$31-09
Subscriptions:	2-00

CREDIT BALANCE:	<u>\$33-09</u>
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Moved by Mr. F. Wilkinson and seconded by Mr. E. Walker that the Treasurer's Report be accepted.

GENERAL BUSINESS: The President reported on the Land Utilisation Study as discussed by a sub-committee. A report on the sub-committee decisions shall be presented to the Council. A motion on the study after discussion was moved by Mr. W. Cathcart and seconded by Mr. R. McCosker.

The meeting was reminded that nominations for office bearers for the 1974-75 year must be received in writing by the June meeting. Nominations forms will be included in the next magazine. (See Back Page)

OUTING REPORTS: Mr. W. Cathcart reported on the May outing to Dr. Roberts Waterhole which he led with Mr. W. Goebel. Attendance was 26.

The next outing will not be to Boonoo Boonoo crossing because of bad road conditions. A new venue will be announced.

A minute of silence was observed in memory of our late Treasurer and good friend Miss Joan Westcott.

CLOSURE: The meeting closed at 8.40 p.m. after which Mr. D. Bluhdorn presented "Tasmania - Off The Beaten Track".

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A brief account of the koala research programme conducted by the Fauna Conservation Branch of the Department of Primary Industries. A talk by Dr. T.H. Kirkpatrick of D.P.I., Hermitage, to Stanthorpe Field Naturalists Club:-

This talk was accompanied by a department-made documentary film showing the techniques used in collecting, marking and relocating koalas in the study area used by the Branch. This study area is in the Oakey district, others are being established in the Emerald district by Dr. G. Gordon who is in charge of the project.

The research programme into koala ecology has as its ultimate objective understanding the what, why and how of the factors that limit koala abundance, and the end is some years away yet. In this account some of the answers that are suggesting themselves as a result of work so far undertaken are given, not as final answers but as ideas that will either be confirmed or refuted by subsequent studies.

It is well known that koalas are today much less abundant in Queensland, and indeed in Eastern Australia generally, than they were fifty years ago. It is, of course, constantly asserted by various persons that the cause of this is a 3-month open season in Queensland in 1927 (nothing, it must be admitted, to be proud of, but something that did happen), but no person with even a rudimentary understanding of biology finds this even remotely acceptable. Indeed, persons actively involved in that open season insist that koalas were as abundant in years following it as they were before, and it was during the 1930's that the real decline occurred, a decline that was associated with a conspicuous upsurge in both respiratory and ophthalmic diseases in koala populations. Whether these diseases were a primary cause of the decline, or simply an indication that something fundamental had gone wrong with the habitat of koalas cannot be divined at present, but it is certain that whatever occurred during those years is still operating today so that koala numbers are prevented from reaching the abundance of fifty years ago.

In the study area at Oakey, however, koala populations are high, and it is hard to believe that they could become more abundant - in terms of koalas per acre - but immediately outside the area numbers are quite low. The indications are that the adult population in the study area is breeding successfully - some females at least have had one young each year over the last three years - the adults seem to be fairly long-lived and most have survived the 3 year period of study - but very few of the young produced have remained in the area of their birth. Thus adult numbers in the study area have remained fairly constant, but as noted above numbers outside the area inhabited by the breeding population are low and have not increased noticeably.

It has been observed, however, that marked young from the study area, once they become independent of their parents, leave the area soon afterwards. And at the same time unmarked young appear briefly in the study area - obviously in the process of moving away from similar nearby areas of adult abundance. So far, few of these young koalas have ever been relocated, and although the research programme does not allow of a great

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KOALA RESEARCH PROGRAMME (Cont) :

amount of "blind" searching for marked animals at great distances from the study area, the indications are that the majority of the juveniles die during their second year of life.

The pattern that seems to be emerging is a familiar one to students of wild animal populations, in that there is a basic area of suitable territory inhabited by the breeding adult population, surrounded by less suitable territory into which the surplus reproduction migrates each year. Here the juveniles survive for a time, but ultimately those that do not return to the breeding area and replace adult losses perish for one reason or another, - starvation, predation, disease, parasitism, exposure or some other factor.

In the study area at Oakey, the preferred habitat appears to be the river red gum forest bordering the waterways of the area, and it is here that the adult breeding population spends most of the year. Adjacent to the river red gums (and where the land is not cultivated) is a widespread eucalypt forest consisting mainly of shiny-leaved (poplar) box, where a smaller population is found. A most interesting feature of koala activity in this forest is the obvious preference exercised for a relatively small number of individual trees, which are conspicuously defoliated in comparison with the rest of the forest.

On the ridges beyond the box flats, the main tree species of apparent interest to koalas is the mountain coolibah; a small scattered population occurs but no such definite preference for individual trees has been noticed.

Composition of the several segments of the population varies, but the overall pattern seems to be the adult breeding population with dependent young in the river red gums areas, occasional adults plus independent young in the box flats and mostly independent juveniles on the ridges.

It seems reasonable to suggest, on the basis of these (as yet unfinished) observations that the "base" breeding population inhabits the highly suitable and thus preferred red gum areas, with occasional forays into adjacent, less suitable territory, and the surplus young produced each year move into the adjacent box flats and coolibah ridges where they eke out a meagre existence, finally to perish during their second year of life unless (and it would normally occur in a few) some room is made for them by deaths in the adult breeding population.

Although the koalas that have been found dead and dying are usually suffering from the eye disease mentioned earlier, it seems reasonable to suggest that susceptibility to this condition (which is normally fatal) is a consequence of their being in poor condition, rather than a direct cause of death.

It is tempting to speculate that the koala die-offs of the 1930's may have been related to habitat deterioration (for koalas) brought about by selective land clearing which ultimately reduced the preferred koala habitat to that presently available, (which koalas are surely saturating today) and left the large numbers of koalas previously inhabiting the now-cleared forests to attempt survival in the unsuitable tree communities left by land-holders, with consequent debilitation and disease finally reducing their numbers to what the environment could safely carry.

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KOALA RESEARCH PROGRAMME (Cont):

Whatever the true explanation is, however, it is evident that the koala population that exists today, at least in the areas studied by us, is as high as it will ever be as long as the forest remains as it is. Any change in the status of koalas, whether locally or generally, will depend on what changes to the koala environment, particularly in the availability of preferred tree species, occurs in the future. There can be little doubt that the reproductive potential exists in remaining breeding populations to repopulate quite quickly any suitable areas that become available, either by natural regrowth or deliberate planting, and it is reasonable to suggest that the diseases referred to will continue to be limiting only in marginal situations as they are today.

NOMINATION FORMS FOR OFFICE BEARERS:THE STANTHORPE FIELD NATURALIST CLUB.NOMINATION FORM JULY 1974.

I nominate:

For the Position of:

Proposed by:

Seconded by:

I agree to accept the above position if elected: .

..... Date / / 1974

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