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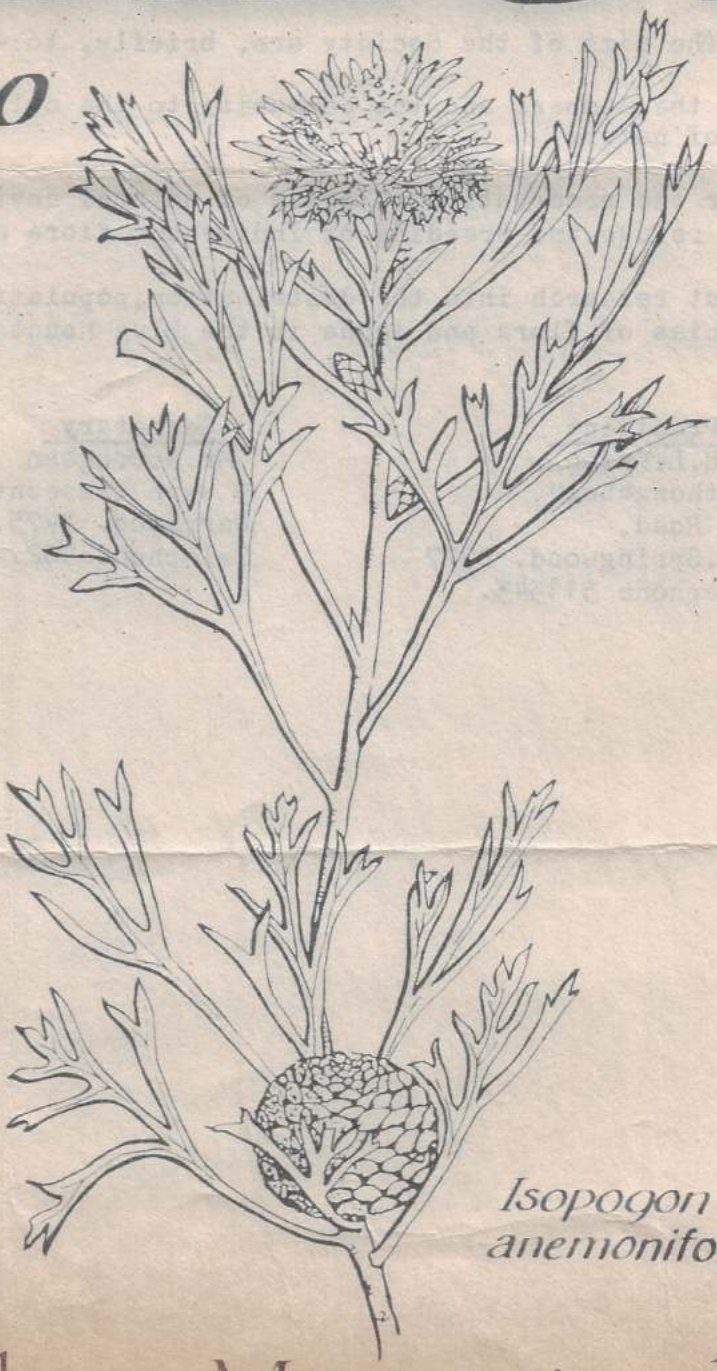
KALORI

JUNE '70



Isopogon anemonifolius

Lower Blue Mountains Wildlife Conservation Society

CONSERVE, PRESERVE, INVESTIGATE, EDUCATE.

Kalori is published monthly by and for the members of the Lower Blue Mountains Wildlife Conservation Society.

The aims of the Society are, briefly, to:-

1. Educate the members and the community to the cultural values of nature.

2. Work for the reservation of areas of natural environment for the refuge and breeding of indigenous flora and fauna.

3. Carry out research into the distribution, population and species of flora and fauna in the Blue Mountains.

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A message from the President --

It is with regret that the Executive of the Society has found it necessary to postpone the regular monthly meetings.

Over the past eighteen months attendance has regularly dropped until it has reached a stage where it was determined that it was uneconomic to continue renting public halls for two or five people.

The Society has endeavoured to make available various projects and activities but these have been failures. Repeated attempts have been made to interest members to take an active part in conservation instead of being armchair grumblers. Some members are deeply engrossed in some natural history project but we have rarely seen most of the potential seventy or so members.

Consequently we have decided to carry on the business of the Society at Committee level. At any time members may ask for a public meeting to be called, but until such time as the attitude of members is made known the Society will retreat into the enclave of the four or five Committee members.

Until such time as it is thought that a renewed interest is apparent -- or the Annual Meeting in October.

H.L.Paish
President.

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For those members who wish to be actively involved in practical work, the following projects have not yet been abandoned.

Post-fire plant regeneration study, Campfire Creek and College Trail.

Blue Gum Creek Ecological Survey.

Springwood Primary School natural area construction.

Secretary.

THE SURVEY

First Trapping Project

The first trapping proved very successful. Over the two nights, eleven animals were captured, a reasonable percentage out of the 64 traps set.

The traps functioned well, although some modifications are necessary, (a) to facilitate removal of animals from them, and (b) to prevent injury to animals.

It is worth noting that there were no fatalities, though there were two cases of shock, one severe, and two cases of slight injury caused by the trap. The badly collapsed animal, a small native rodent as yet unidentified, was brought home, and at this stage - ten days later - is almost fully recovered.

The animals captured were of three different species:-

Antechinus	6 specimens
Small native rodent	4 specimens
Large native rodent	1 specimen

The marsupials were of the broad-footed Antechinus genus and were all of the one species, probably stuartii. The small rodent has yet to be identified. The large rodent resembles the introduced Norway Rat but is not so robust and has a much longer tail. Its fur is also much less coarse. It is probably Rattus assimilis, a native species known as the Allied Rat.

It is interesting to note that the marsupials were by far the most aggressive. Their method of biting is to clamp their jaws and hang on grimly.

The small rodents were particularly inoffensive, rarely attempting to bite; they seemed to suffer more from handling than the marsupials, in fact two specimens showed signs of collapse.

To sum up -

As successful as we could have hoped for. The two nights spent in the area proved the existence of four species that previously we could only have assumed to be in the area. The fourth species was a Sugar Glider, Petaurus breviceps observed on both nights searching for grubs beneath the bark of the same Acacia.

Traps and handling will have to be improved. Measuring is extremely difficult, and more characteristics will have to be noted. I am going to inquire into the possibility of anaesthetizing captured animals to prevent distress while being handled. For positive identification, some specimens will have to be taken.

K.King

"THE MAMMAL DECLINATION IN AUSTRALIA".

The greatest decline in the mammals in historical times has taken place, paradoxically, in the broad band of lower-rainfall New South Wales, where the Red Kangaroo has increased greatly and other species of kangaroos are common. The region had an abundant fauna of rodents, small wallabies, bandicoots and other small marsupials. The great majority have disappeared from the area and survive only in central Australia or Western Australia. A few, such as the Eastern Hare-wallaby (Lagorchestes leporides), White-tailed House-building Rat (Leporillus apicalis), and White-footed Tree-rat (Conilurus albipes), appear to have become extinct. One other, the Pig-footed Bandicoot (Chaeropus ecaudatus), has not been seen for perhaps 50 years and may also be extinct. Western New South Wales was heavily overstocked with sheep, and, by the early 1890's, the sheep population exceeded 15 million. About that time the area was invaded in large numbers by the rabbit and was hit by severe drought. Sheep numbers have never since reached half that maximum figure. Although the decline of the native mammals was not documented, there can be no doubt that they were unable to withstand this combination of habitat-destroying factors.

In Western Australia the greatest decline in native mammals has occurred in the most intensively farmed area, the sheep and wheat belt of the southwest It is also the part of the State where the rabbit occurs in greatest numbers. Although a considerable part of central Australia has never been grazed by domestic stock there seems to have been a reduction in numbers of many mammal species and a few have apparently disappeared from there. The rabbit has invaded the region, and, although it is generally scarce, periodically occurs in considerable numbers, It may have been chiefly responsible for the disappearance of Lesueur's Rat-kangaroo (Betongia lesueur). This attractive animal once occurred from western New South Wales across southern and central Australia to the western coast. It is known for certain today only on a few islands off mid-Western Australia. It is the only burrowing member of the kangaroo family, and the rabbit quickly adopted its burrow systems.

The parts of Australia in which the mammals have suffered least in historical times are the higher-rainfall forested northern, eastern, and southeastern regions. Probably no species has become extinct in those areas, and grave fears are held for only one, the Tasmanian Tiger (Thylacinus cynocephalus). This is probably the only Australian mammal that has declined to near-extinction as a direct result of human persecution. Economic development has so far largely bypassed the tropical

woodlands and forests. There has been a great amount of clearing of the forests in the east and southeast, but large areas of forest reserves and uncleared land remain. The changes caused by commercial forestry operations, burning, etc., have apparently had no drastic effects on the mammals.

Throughout its history the development of Australia has been carried out with scant regard for fauna conservation. The wonder is that we have lost so few species of mammals. However, a considerable number have shrunk to scattered relict populations and are in urgent need of rehabilitation, if that is possible. Surveys are badly needed to discover what remains and where it is located. Scientific studies are also necessary to determine the basic requirements - food, shelter, and living space - of the various species and how these are affected by different land-use patterns and vegetation changes. Ideally, many more wildlife reserves are needed, under the control of fauna protection authorities; nevertheless, the maximum amount of such land can never be more than a small part of the total land area. Although large areas of land are reserved for various purposes, such as commercial forestry, water catchment, and defence facilities, so far little thought has been given to the management of such reserves so that wildlife can derive the maximum benefit consistent with the primary purpose of the reserves. There is also no reason why similar principles should not be adopted in the management of privately-owned land.

- J.H. CALABY.
Principal Research Scientist.
Division of Wildlife Research.

Assemblies of the Meat Ant (Iridomyrmex detectus)

The meat ant is extremely common around Penrith, also in areas where sufficient gravel deposits are found to enable the ant to build its domed nest. All the Australian states have this fairly common ant.

I have made a study of this ant and its habits concerned with the relations between ant colonies. During this study I observed a trait of this particular species of ant that I have not noticed outside my area.

Ants gather in groups of two or three along an ant food trail or a similar cleared area and circle each other on "tip toes" while abdomens are raised and all this is accompanied by rather jerky movements. One ant stands still as another ant circles it, occasionally touching antennae and mandibles. Not all of a group lift their abdomens. When two ants with abdomens lowered meet they link antennae and move apart. The same appears to happen with two ants with raised abdomens. Legs are often shaken during the "assembly". The assembley does not turn into an attack and no formic acid is excluded which is a sign of malice between ants. The assemblies are often carried on for a few hours with constant changes in the partners.

Later, however, I had the chance to experiment with these assemblies. When an ant was placed on a nest foreign to it, its abdomen was raised and an assembly was held. Another ant from the same source was taken to another colony not as close as the former. The result was that the foreign ant raised its abdomen to start an assembley but after a few minutes the ant was killed by the inhabitants.

My theory explaining this behavior is that the ants have a method of identification which identifies ants of friendly neighbouring colonies. Some neighbouring colonies often share food trails and this plus many other smaller reasons could account for this co-existence. Any intruder could be expelled at the seemingly permanent identification points.

The study is by no means complete and by the time this exercise is concluded valuable information of the inter-relations of insect species should be compiled.

Michael Smithson.