KAPITI ISLAND.

There was an extremely good attendance at our monthly meeting in October to hear a lecture by the Auckland regional botanist, Mr A. Esler, on Kapiti Island. I would like to summarize some of the main points which emerged from this most enjoyable and informative talk.

Kapiti Island lies just off the coast of the Wellington province, about $3\frac{1}{2}$ miles out from Paraparaumu. It is 6 miles long and up to 1 mile wide, with a total area of approximately 5000 acres, or a little smaller than Rangitoto. It rises to 1700', twice the height of Rangitoto.

The land was occupied by Maori tribes for longer than we know and the island has a history as a headquarters for whaling, with up to 600 whalers resident at certain times. Around 1840 the land was taken up for farming and about half of the island was cleared. From this time on whaling activity declined. The northern part was still being farmed until quite recently but the island is now all sanctuary except for about 30 acres.

Under the 1897 Act of Parliament, the Crown was to take over the land as it became available and the island was made a reserve for birds and plants. The Wellington Acclimatization Society in its wisdom introduced deer and opossums in 1893 and Fallow deer in 1900. This was in addition to the wild pigs, goats, cattle and rats already present. At one stage the opossums were even protected by law! The introduced deer however, failed to establish and the goats were eventually exterminated.

The island's flora and fauna have been reported on perhaps more than any other place in New Zealand. Cockayne spent a fortnight there in 1907 and wrote a bulletin on it but it was not a very full report. Much more useful were two reports from non-botanists. One of these was a field officer of the Lands and Survey Dept. who in 1902 wrote a report for the Government which included a lot of botanical details. Regular reports have also been made to the Lands and Survey Dept. each year by the caretaker on the island.

This is some of the background to Mr Esler's own survey. He was concerned to study the changes that have occurred in the vegetation. Relatively few species of plants have taken part in these changes, making them fairly clear to follow. They have also taken place in the absence of grazing animals.

At this point we were shown a set of slides to acquaint us with the island and its vegetation. They illustrated the following important points:-

1) There are 450 acres of grassland on the island which are still in very much the same state as they were in 1928.

2) Pseudopanax anomalum plays a very important part in the ecology of regeneration of these grassland areas.

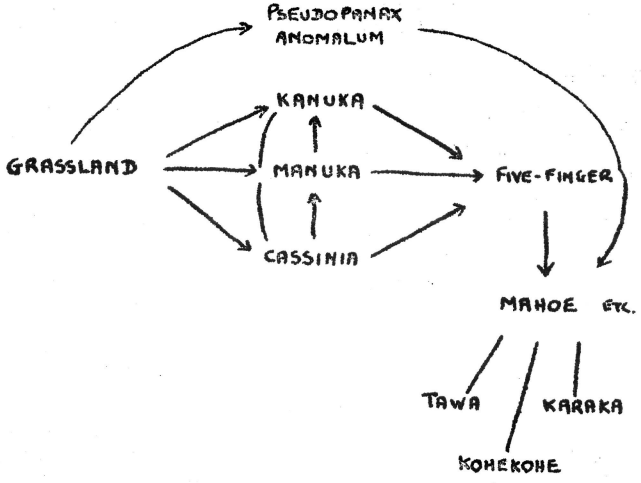
PSEUDOPANAX
ANOMALUM
KANUKA
GRASSLAND
MANUKA
FIVE-FINGER
CASSINIA
MAHOE ETC.
TAWA
KARAKA
KOHEKOHE

FIG. I

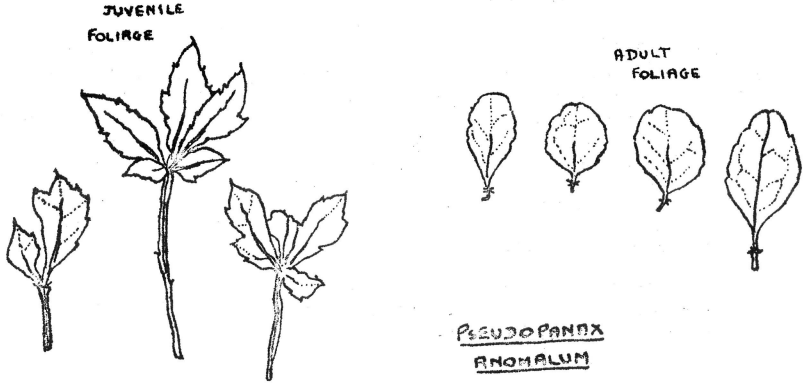
JUVENILE
FOLIAGE
ADULT
FOLIAGE
PSEUDOPANAX
ANOMALUM

FIG. II

3) At the beginning of the century there were a large number of big northern ratas, now dead. Cockayne thought that wind was causing their death, but Mr Esler established by studying every remaining stump and finding that they all contained some charcoal that fire had been the cause.

Succession - See Fig. 1.

The grassland to manuka succession is accelerated by grazing, burning and drought. In the absence of these factors, the long grass prevents any establishment of the manuka. This is why there are still the quite large grassland areas. The manuka is generally of an age, as earlier established bushes which develop a rounded shape in the absence of competition, are later killed out by the thick upright growth of their offspring.

Where kanuka comes in it takes over from manuka, being much longer lived and taller. The kanuka canopy can remain for 100 years or more before allowing anything to break through it. We were told that, because of these differences, we should carefully distinguish between manuka and kanuka and not merely refer loosely to'teatree scrub'.

One interesting thing that puzzled Mr Esler was why there was often a sharp line of demarcation between kanuka and mixed kohekohe and karaka. The answer lay in the soil type. The kanuka was growing in soil, the kohekohe and karaka were growing on rock. The latter were able to establish more easily on the rock because of their large fleshy seeds, the kanuka with small seeds was unable to do so. The early stage of succession on the rock is not known for certain but probably consists of plants such as Coprosma propinqua.

Pseudopanax anomalum (see fig. taken from "A Key to the Divaricating Shrubs of New Zealand" by G. Marie Bulmer) is one of the few plants that can withstand, in its young stages, the amount of shade provided by the ungrazed grassland situation. Other plants then grow above it, promoted in its shade, but it remains under the resulting canopy as a rounded bush which occasionally throws a few long shoots as if to show that it can make the effort to compete for light!

It seems from some of these facts that sometimes it may be more desirable to have some grazing than to lock up an area completely and that perhaps bad farming is better than no farming at all.

The lecture ended with some slides of the birds on the island, including kaka and weka. Mr Cozens proposed the vote of thanks, which was carried by acclamation.