LECTURES

MAY 1971.

Our meeting on May 5th was addressed by Professor F.J.Newhook on the subject, "Potential Island Reserves near Coromandel." The islands in question were those in Coromandel Harbour threatened by possible sub-division for the siting of holiday homes. Concerned for their future is the recently formed Coromandel Physical Environment Committee, of which Prof. Newhook is a member and which was recently instrumental in obtaining a reprieve for the threatened Manaia kauris. Their wish is to preserve off-shore islands such as these, valuable because they are unspoilt to a large extent and because of their lack of browsing animals. This is in line with the resolution passed at the 11th Pacific Science Congress calling on governments in the region to preserve off-shore islands wherever possible.

We were shown slides of the area, starting with a shot of the peninsular dominated by Mt.Moehau. Professor Newhook said that it was his ambition to see the area from just north of Colville to Sandy Bay (Point Charles) made into a reserve or farm park, similar to the Te Paki Station in Northland.

We saw views of the following islands:-

Gannet Island. - A small island with gannet colonies on the higher parts and pied shags on the remainder. Very little vegetation.

Happy Jack Island. - Not much of interest botanically. Head high scrub, occasional flax and manuka, a few orchids and an occasional pohutukawa. Soil samples were taken from a strange bare patch supporting no vegetation whatsoever and these turned out to be extremely acid. There are dense rabbit populations which it is recommended should be eliminated.

Bush Island. - Two extensive gannet colonies here. Studies by ringing have shown that at 18 months the young birds fly north to various parts of Asia, returning after 3 years to nest within a few feet of where they were reared. There is no taraire on this island.

Double Island. - Pohutukawa dominated forest on one side. The other, less interesting.

Goat Island. - The headquarters of the party of senior students from Auckland University who went with Professor Newhook to study the Island's flora and fauna more thoroughly.

On the northern slopes are pohutukawa, red matipo, ngaio and toetoe. There are two pockets of mature coastal forest on the island, with Beilschmiedia tarairi, Dysoxylum spectabile, Corynocarpus laevigatus and huge kanuka well up with the dominant forest canopy.

The presence of Paratrophis banksii shows an affinity with the Hen and Chicken Islands, although puka, Meryta sinclairii, which is found on the Hen and Chickens, does not occur here.

There are extensive areas of teatree scrub, with Melicytus ramiflorus, Melicope and Brachyglottis repanda coming in. Several species were represented

by exceptionally large specimens - tutu with trunks an unbelievable 18" diameter; a hinau, Elaeocarpus dentatus, had a girth of about 10'; huge parapara, Heimerliodendron brunonianum, one with a canopy spread of 50 feet and masses of seedlings beneath - up to 200 - 400/sq. metre at the cotyledon stage; large tawapou, Planchonella novo-zelandica, with 24" diameter trunks, with much regeneration beneath them.

One puzzle was the complete lack of regeneration of puriri beneath a mature tree having both flower and berry. There was some discussion on this point at the meeting, others having noted a similar lack elsewhere. Professor Newhook would be interested to hear of any possible explanations for this.

In proposing a vote of thanks to Professor Newhook for a most interesting lecture, Mr. Warren said that he felt sure our Society would strongly support the efforts being made to preserve these obviously unique islands.

A.D.P.

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JUNE 1971.

One of the best lectures we've had for a very long time was how Mr. Butler, in his vote of thanks, summed up the meeting held on June 2nd., when Professor L.H.Briggs of the University of Auckland's Chemistry Department talked to us about what was, he said, the oldest commercial industry, namely that concerned with the extraction and distillation of essential oils and perfumes from plants.

Professor Briggs had obviously been to a great deal of trouble preparing for the lecture and and brought along many examples of scented plants and bottles of many different essential oils, which were passed round during the evening. He also had his own still which, with the aid of a primus stove, he used to distil during the course of the lecture an incredibly large quantity of essential oil from the Australian plant Chamaelaucium. The leaves of this plant yield about 2% essential oils, mostly of commerce.

Among plants passed round were the camphor tree, Cinnamomum camphora, from which camphor is extracted commercially by steam distillation; Myrtus bullata, in which were discovered three completely new compounds; Myoporum laetum, ngaio, containing a rare compound also found in rotten sweet potatoes - the oil vessels show up very clearly when the leaf is held up to the light; tea tree; Eucalyptus spp, some of which contain up to 8% essential oil - the hot sun volatilizing the oil causes the distinctive blue haze which gives the Blue Mountains near Sydney their name; Melicope ternata.

We were shown two sets of slides, the first showing a series of apparatus used for distilling essential oils, dating from 1507 to more modern times and including a still used for lavender in S. France and one for Eucalyptus oil (this oil was the first Australian export).

The second set showed the process known as 'enflorage' which has to be used to extract the perfume from flowers such as jasmine, hyacinth, Gardenia and violets which have no essential oils. Briefly, the flowers are placed on a layer of deodorised fat in a tray and an upturned tray of fat is