

shown in the Hunua Ranges (N. truncata) and in the middle Wanganui (N. solandri), where they occur in pure stands sharply distinct from the surrounding rain forest; but as the Titirangi area was cut over for kauri in the early days of settlement, and has been combed again for timber and firewood, perhaps the present distribution of the remaining beeches is not a true indication of their original habit.

A.D. Mead.

BEECH ON THE NORTH SHORE

On the North Shore there are several stands of beech (Nothofagus truncata) which, I understand, is closely allied to the "Red Beech", N. fusca.

In Kauri Park at Birkdale there are about two dozen specimens dotted about in the 14 acres. We measured these trees and the largest was 33 inches in circumference and about 40 ft. in height. The majority were between 20 - 24 inches in circumference and about 25 ft. in height. We measured several dead trees, the tops of which had completely rotted away, and the largest of these was 68 inches in circumference - another 50 inches. In fact they were all quite a lot bigger than the largest live tree there. We also noticed many of the smaller trees, in the 9 - 22 inches category, seemed to be dying on the tops. On the other hand we did see some perfect specimens. We came across numerous pieces of beech lying on the ground, easily recognised by their stag-like appearance.

My husband tells me that his father, who settled in the district some 70 years ago, knew of only two beech seedlings in the district. One was at Chelsea and the other on the property adjoining Kauri Park. What happened to the former I do not know, but the latter can still be seen - just a dry stick - it has obviously been dead for many years.

Another interesting point is that when Mr. Fisher Sr. settled on this property, he found a number of stumps and remains of dead beech on several ridges.

On the five acres adjoining Kauri Park we found some really good specimens. The largest is 56 inches in circumference and about 60 ft. tall, growing on a steep bank facing the south. Alongside it grows another fine beech about 40 ft. high and 39 inches in circumference.

We can boast of half a dozen on our own property - mostly about 25 ft. tall and 20 - 24 inches in circumference. A very big one

blew down about 30 years ago.

At Glenfield (off Manuka Rd.) there are a few medium-sized beech trees growing, but the biggest and best of all we have inspected, are to be found at Paremoremo (the hills behind Albany). Here we estimated the highest to be 80 ft. and its circumference is 68 inches. Also it was here where we found the only seedling - please note, it is still there!

Unfortunately, we have not had a chance to examine the ones at Chelsea, but from memory I should say they are good, big specimens.

It all seems to me to present somewhat of a riddle. Why are there no seedlings to speak of and why are so many of the younger trees dying off? Maybe somebody can supply the answer some day.

In conclusion I would just like to say that the patch of bush at Paremoremo is well worth visiting - especially in the spring when the Kowhai is in full bloom.

Muriel Fisher

We are much indebted to Mrs. Fisher for her careful and detailed study of the beeches in her area. She raises two interesting questions.

(1) What is the relation between N. fusca and N. truncata? As other students sometimes find these species confusing, it might be mentioned that the matter was not really cleared up until Cockayne published his monograph on the New Zealand Beech Forests in 1926 and defined the species and the hybrids between them as he conceived them to be. Previously N. fusca and N. truncata had been well and truly confused. In Cheeseman (1926) N. truncata is given as N. fusca var. colensoi.

Nowadays we recognise:

Nothofagus fusca (Hook. f.) Oerst.

Red-beech

Nothofagus truncata (Col.) Cockayne

Hard-beech

It is an interesting fact that "wood-users, because of the differences of physical wood properties, had been sure of the segregation from N. fusca before botanists". The wood of hard-beech seems even more durable than that of red-beech, and the fact that the saw blunts more readily when working with it justifies its name of hard-beech. Moreover, the wood of red-beech is deep red when freshly cut later turning to a light brown, while freshly cut timber of hard-beech is pink in colour.

But it is not to be supposed that Mrs. Fisher is prepared to cut down a beech for identification purposes, so we provide a very simple method of distinguishing the species simply by studying the leaves. Hard-beech has five to six distinct pairs of veins per leaf while red-beech has only three to four.

Now study the leaf margin and you will find that red-beech has 6-8 deep acuminate teeth on each side while hard-beech has 8-12, which are both shallow and blunt. Furthermore, on trees and saplings above 6-10 feet high you will find on the under surface of red-beech leaves, little pits (domatia) at the axils of the one or two lower side veins. These have never been recorded in hard-beech.

There are too, slight differences in the flowers, but I shall not discuss these, as one may miss the flowering season and further, the flowers are small and not at all easy to study, indeed in his study of them L. Poole used a X7 to X20 binocular microscope.

(2) Mrs. Fisher's second problem as to why the beeches seem to be dying out and why there are no seedlings to speak of, raises a very interesting issue. It should be noted, however, that it is held that some time during the thirteenth century there was a change in climate in this country involving an initial fall of temperature. New Zealand however, has greatly varied physical features, which cause it to show as Garnier put it "intense climatic regionalism", so that various types of climatic change affected different parts of the country. If then different species of our forest trees flourish best in different climates it follows that there will be an alteration in the composition of our forests, some species will tend to move out and others tend to move in.

We take this opportunity of thanking her for her careful records, and hope that it will be possible to obtain from her in the future further observations on other beeches in her area.

We had a truly exciting meeting on Thursday 17th September when Dr. Godley, a past president of our Society and now head of Botany Division spoke of his experiences in South America as a member of the Darwin Memorial Expedition to Chile. The meeting was held jointly with the Auckland Branch of the Royal Society of New Zealand, the National Institute of Horticulture and the Auckland University.

Dr. Godley was heard by a large and enthusiastic audience while much pleasure and information was derived from his beautiful colour slides. He has been kind enough to forward some notes on his trip.