

environment of the native. The potato is of such a hardy nature that it can be grown in all districts and, moreover, is prolific, yielding a plentiful return for the labour expended. Hence it was speedily introduced into districts which, like Tuhoe, had formerly possessed no cultivated foods and also tended to replace the kumara amongst other tribes. Again it effectively supplanted the aruhe, the fern root (*Pteridium esculentum*), as one of the staple vegetable foods. Forest products were also neglected in its favour with interesting results. Formerly, the forest had been strictly preserved as being the source of berries, birds and rats; now, however, with the coming of the new food plant, this care became unnecessary, and year after year inroads were made upon it for potato cultivations. In some districts the forest destruction was quite marked."

Elsewhere (p. 65) he quotes Swainson that, in 1857, 8,000 people in the area of the Bay of Plenty had under cultivation nearly 3,000 acres in wheat, 3,000 in potatoes, 2,000 in maize, as against 1,000 acres in kumara, and it must be remembered that a proportion of these crops were grown under a system of shifting cultivation.

Elsdon Best (1924) describes in detail two methods of forest clearing for kumara cultivation, in one of which the canopy trees were left standing and only the understory burnt. This was the method used round Taupo and locally termed "whakaota". This method was used for potatoes in the neighbouring Ahimanawa forest margins up to 1900 (Sunderland, 1957) and perhaps as recently as 1950 (N. Weeks, pers. comm.). It is clear that a kumara technique was used for potatoes.

Fletcher (1914) gives evidence of the replacement of forest by scrub to the north of the lake over a period which he then estimated as 300 years. (This corresponds with the arrival of the Ngatituwharetoa tribe, but it should be noted that they had found a pre-fleet tribe, the Ngatihotu, in occupation. As kumara only arrived with the fleet, the latter may not have been concerned with forest cultivation, fern-root being their staple foodstuff.)

According to one of Fletcher's informants, evidence of the Oruanui forest having extended from Atiamuri on the Waikato River to the lake at Rangitira Point was visible as recently as 1845, while another informant gave traditional evidence that about 1775 forest extended eastwards from the Waikato River at Aratiatia on to the margin of the Kaingaroa Plain to include the Opepe Bush, and further south Motukino, reaching the lake at Waitahanui. At the present day islands of podocarp forest, such as Matangatera and Motupuka link this with the Opawa Bush, so that in fact it seems likely that podocarp forest was continuous round the whole of Lake Taupo before Maori occupation.

Hill (1911) adds further information about the original forest margin on the Kaingaroa Plain, while Henry (1954, 1955) gives supporting evidence from the Atiamuri area of former heavy forest on what is now scrubland and even on the inhospitable hollows known as frost flats.

The capture of kiore is described in some detail by Elsdon Best (1942):

"The Maori knew when rats would be numerous in the land; they knew this by observing the flower and mast of the beech trees; when these foretold a plentiful season, then it was known that the rats would be numerous . . .

"When forest foods grew scarce numbers of rats would betake themselves to the open lands supporting mainly scrub and fern, such land is described by the term 'parae' (level or undulating open country). When the beech mast came to an end then rats often sought such 'parae', where they lived in holes or burrows; when they became numerous at such places the fern would be burned off, at least in some cases. After the fire the natives would search diligently the burnt