

## CHAPTER 12. FORESTRY, KAURI GUM AND FLAX

New Zealand trees quickly attracted the Crown's interest. On his first visit, James Cook wrote of a kahikatea, 'we found a tree that girted 19 feet 8 Inches 6 feet above the Ground...I found its length from the root to the first branch to be 89 feet, it was as straight as an arrow...so that I judged there was 356 solid feet of timber in this tree clear of the branches.'<sup>1</sup> Timber was required for buildings, ships, fuel and fencing, in peace and war, and in the private and public sectors. From the mid nineteenth century, settler conservationists argued the importance of forest for environmental reasons. Towards the end of the century, forest landscapes had become essential for tourism.

In the period covered by this report, forestry - that is the science or management of trees - was concerned more with the felling of indigenous forest than with other forms of management or types of forest, although the reservation of indigenous forest and afforestation with introduced tree species were also begun. After a brief survey of Crown-Maori involvement with trees prior to 1840, the chapter examines forestry legislation, institutions and policies within those three types of forest management; felling of indigenous forests, its reservation, and afforestation with introduced tree species. The final section looks at Maori forestry from 1840, particularly as this appears from parliamentary debates and official publications. The main sources for this survey are Michael Roche's *History of Forestry* and his *Forest Policy in New Zealand: An Historical Geography 1840-1919*.<sup>2</sup> There are also brief surveys of government involvement in two other industries of significance to Maori; kauri gum, since it was a product of the forest, and flax because of its centrality to economic and social life.

### 12.1 Maori and the Timber Trade 1769-1840

Prior to 1840 New Zealand trees, especially the kauri and kahikatea, were wanted by the Crown and private commercial interests for ships' masts and spars, and later for building timber in New Zealand and overseas. So it was that twenty-five years after Cook's assessment, the timber trade between Maori owners and the Admiralty, merchants and missionaries began at coastal areas with suitable landings in northern New Zealand. At

1. J C Beaglehole (ed), *The Journals of Captain James Cook On His Voyages of Discovery. The Voyage of the Endeavour 1768-1771*, Cambridge, Cambridge University Press for the Hakluyt Society, 1955, p 206

2. Michael Roche, *History of Forestry*, Wellington, New Zealand Forestry Corporation Ltd with GP Books, 1990; M M Roche, *Forest Policy in New Zealand: An Historical Geography 1840-1919*, Palmerston North, Dunmore Press, 1987

first individual trees were selected, felled, sawn, and loaded for transport overseas, but from the 1820s small enclaves were established for timber-yards and ship-building. In the late 1830s the situation changed again when at least one timber partnership, Samuel Martin and Lachlan McCaskill, purchased land from Maori in the Thames district, from which to cut timber.<sup>3</sup>

Payment for trees, land and Maori labour was in axes, guns and ammunition, iron tools and other trade goods. Negotiations for all three were arranged by Maori chiefs who thereby exercised control over the timber trade. There is evidence that such chiefs placed areas of forest under tapu for future transactions, an example being the Bay of Islands chief Titore who, in 1834 reserved an area of trees for two years. The implication is that he reserved the area so that the trees would be available to his buyer at a later date.<sup>4</sup> The chiefs received the payment goods and distributed them among their men and women workers although, on occasion, the workers were paid independently as well. They exploited the competition between the Royal Navy and commercial interests for spars. While the specialised work was done by European sawyers and carpenters, who were accordingly paid more, as the demand for timber grew Maori demanded and received higher payments.

Maori were needed for several aspects of the timber trade: for their knowledge of the whereabouts of stands of trees and the characteristics of tree species; and for their labour in felling, moving the logs to the coast, and loading the sawn timber into ships. As the more accessible stands were felled and demand increased, Maori were involved in new techniques for securing logs. It was generally Maori who drove logs through flooded creeks to the coast, a method of transportation which was to become a distinctive feature of the kauri trade.<sup>5</sup> But Maori were later to have second thoughts about the practice of timber floating.

To 1840, then, Maori participated as powerful and skilled players in the timber industry and, in the wider sense, in the deforestation of New Zealand's lands. Maori were to continue in the industry in the decades after 1840 but not always with the same control, as the Crown obtained ownership of 'waste' lands that were forested, imposed laws and regulations on timber-felling, and adjusted policies as indigenous forests were seen to be reducing.

3. In this section on the period 1769 to 1840, most of the information comes from Roche, *History Forestry*, Chap 1

4. Roche, *History Forestry*, p 20

5. Roche, *History Forestry*, pp 14-44

## 12.2 Forestry: Crown Policy and Legislation, 1840-1912

When discussing forests, several overarching factors must be remembered. Firstly there was the issue of European settlement. Between 1840 and 1912, and indeed well beyond that date, Crown policy on land-use favoured indigenous deforestation for European settlement and agriculture over the demarcation and maintenance of reserves of indigenous forest. This was articulated in the first year of Crown government by officials at the Colonial Land and Emigration Office. When they were asked to comment on the suggestion that the Crown should reserve kauri forest to provide supplies for the Royal Navy, the officials replied: 'We cannot however recommend that any reservation should be made....As to reserve the Forests is to reserve the land, and with whatever object it is made Crown Reserves of land in a new Colony are in our opinion impediments to the progress of settlement and hurtful to the interests of the settlers.'<sup>6</sup> References to deforestation and settlement versus forest reservation recur throughout the period. During the debate on the New Zealand Forests Bill in 1874, William Buckland of Franklin maintained that Nelson province would achieve prosperity by 'the destruction of its forests so that its waste lands may become fitted for settlement.'<sup>7</sup> Twenty years later, Thomas Kelly, MP for New Plymouth, reiterated this theme. The best way of dealing with forest covered land, he said, was to utilise it for agricultural purposes.<sup>8</sup> Not until 1925 did the Minister of Lands and Survey acknowledge that it 'would have been better for New Zealand as a whole, if hundreds of thousands of acres felled and burnt had been allowed to remain virgin bush.'<sup>9</sup> Nevertheless the alternative idea of indigenous forest reservation for future use as a management strategy also recurs throughout the period and was, on occasion, practised although settlement objectives predominated.

Another pertinent factor was the boom-bust nature of the New Zealand economy in relation to sawmilling technology. Expansionist times created improved sawmilling technology which demanded heavy financial investment in the timber industry. This became a liability when depressions followed. The cycle impacted detrimentally on forests and on Maori owners, as R.C.J. Stone shows in his examination of the timber industry within Hauraki rohe.<sup>10</sup> But by 1909, improved, more efficient sawmilling technology was seen to bring wider benefits nationally. It was estimated that, in what became known as the West Taupo podocarp forests, there was more than twice as much accessible timber on Maori and freehold

6. Roche, *History Forestry*, p 22 quoting Torrens and Villiers (Colonial Land Emigration) to Colonial Office, 7 January 1841, G1/1, Colonial Office Co 209/2 [micro film National Archives]

7. quoted from Graeme Wynn, 'Conservation and Society in Late Nineteenth-Century New Zealand', *New Zealand Journal of History*, vol 11, no 2, 1977, p 132

8. quoted by Roche, *History Forestry*, p 137 (citing NZPD, 1894, vol 85, p 443)

9. quoted from Robin Hodge, 'Nature's Trustee: Perrine Moncrieff and Nature Conservation in New Zealand 1920-1950', PhD thesis, Massey University, 1999, p 271 from Annual Report, Department of Lands and Survey, AJHR, 1925, C1, p 3

10. R C J Stone, *The Economic Impoverishment of Hauraki Maori through Colonisation, 1830-1930*, Paeroa, Hauraki Maori Trust Board, 1997, Chap 5. There is further discussion of this in the final section on Maori forestry

land at 135,000 acres than on Crown land at 60,000.<sup>11</sup> The 1909 Timber and Timber Building Industries Commission, for which these figures were obtained, noted that, on this Maori and freehold land, sawmillers were able to operate modern and efficient machinery, which reduced costs, because they could lease larger areas. At that time Government regulations restricted sawmillers on Crown lands to 800 acres to prevent the emergence of dominant firms. Therefore costs of timber production on Crown lands, the 1909 Commissioners argued, 'proved detrimental to cheap production and profitable working of timber'.<sup>12</sup> Whether Maori benefitted from their supposed advantage will form part of the final section on Maori forestry.

### 12.3 Felling Indigenous Forests

Crown intentions on forests were first set out in a proclamation in the *New Zealand Gazette* of 3 November 1841. This declared the ownership status of forests and set out conservationist objectives for kauri. It confirmed Crown ownership of all land, and therefore of forests, purchased from Maori under the pre-emptive provision of the Treaty of Waitangi (which operated between 1840 and 1844 and between 1847 and 1862). In relation to conserving kauri forests, it drew attention to an 1829 British Act of Parliament which made damaging trees a felony, even though this legislation only applied to Ireland.<sup>13</sup> The proclamation also referred to the destruction of kauri forest on Crown land sold by Maori. It announced that 'serious depredations' were being committed on kauri forests and offered a £5 reward for information leading to prosecution. It called for forest preservation for Royal Navy use.<sup>14</sup> Preservation in this context meant conservation for use in the future.

Despite this early desire for kauri conservation, Roche argues that, until the 1870s, Crown policy on forestry was limited to 'attempting to facilitate the efficient utilisation of forests on Crown lands through a licensing system' for felling.<sup>15</sup> From the 1870s various attempts were made at other forms of management and the licence system was modified. The first piece of legislation to authorise cutting licences, was the Act for Regulating the Sale of Waste Land Belonging to the Crown in the Australian Colonies, passed in the British Parliament in 1842. The Australian colonies were defined to include New Zealand while 'Waste Land' was

11. Roche, *History Forestry*, p 116

12. Roche, *History Forestry*, pp 162-163 (citing 1909 Commission)

13. See chapter 5 above for a discussion of the applicability of English law to New Zealand.

14. Roche, *History Forestry*, pp 22,37-39 (citing *New Zealand Gazette*, 3 November 1841; Roche, *Forest Policy*, pp 22-41)

15. Roche, *History Forestry*, p 45

interpreted as lands vested in the Crown which had been neither freeholded, nor were on long term lease, nor set aside as reserves for public use. The Governor could license the occupation of lands for periods of 12 months for pasturage, and for felling, removing and selling timber upon it for a license fee of £5 per year. The Crown could not sell the land during the period of the licence. Subsequent Crown Land Ordinances in 1849 and 1851, and provincial Waste Land Acts in the 1850s, 1860s and 1870s, introduced regional modifications. But the flat annual fee gave the holder exclusive rights to cut timber on a designated area of Crown land or to transfer a licence to another person if 'improvements' like tramways had been made. Once cleared, the lands were available for settlement.<sup>16</sup>

Under the 1885 State Forests Act the standard annual licence fee was changed to a royalty system which charged sawmillers on the basis of the sawn output. Between 1885 and 1917 the royalty rates were revised seven times, mostly upwards, to reflect contemporary valuations of different species and perceptions of a timber 'famine', as well as settlement goals. Other systems for allocating rights to cut kauri, such as auctioning and tendering, were implemented. In Westland in the South Island, mining wardens were granted the sole right to issue timber cutting licences areas under the Mining Amendment Act 1900.<sup>17</sup>

When the provinces were established under the 1852 Constitution Act, control of Crown Lands was vested in the provincial governments under Waste Lands Boards.<sup>18</sup> By 1869 variations in policy, management and legislation had developed between the various provinces. Hawkes Bay had not passed legislation to facilitate the issue of timber licences. Wellington, Westland and Taranaki had not issued any licences. In Nelson licences were limited to a maximum of ten acres and boundaries fairly precisely defined, whereas areas and boundaries in other provinces were much looser. In Canterbury, where timber was in relatively short supply and in Otago and Southland, more comprehensive forest regulations were formulated than elsewhere. By 1869 all three provinces had gazetted areas where timber was reserved.<sup>19</sup> The timber shortage in Canterbury impacted on Ngai Tahu because it boosted the value of trees on Maori reserved lands and disputes arose over cutting rights.<sup>20</sup>

In Otago, the limited indigenous forests were managed by detailed regulations and strict enforcement. Distinctions were made between licence types and fees; a timber-cutting licence, at £2 10s per annum, was half the price of a sawmilling licence. Dating from 1852 timber reserves

16. Roche, *History Forestry*, pp 51-52

17. Roche, *History Forestry*, pp 143, 135

18. Wynn, p 126

19. Roche, *Forest Policy*, pp 24-25, 38-41 (citing 'The Present Condition of the Forests of New Zealand'; AJHR, 1869, D-22, pp 1-17 and 'Parliamentary Debates and Resolutions. The Forests of the Colony'; AJHR, 1874, vol 2, H-5, pp 1-73)

20. Ross Galbreath, *Walter Buller: The Reluctant Conservationist*, Wellington, GP Books, 1989, p 41

were created to protect forest resources for future use as land was opened for settlement. In 1863 rangers were appointed to inspect the reserves, check the operations of licensed cutters and report on sites applied for by cutters and sawmillers. Roche suggests that these efforts to effectively police the timber regulations were a legacy of arboricultural traditions developed in Scotland and transferred to the Scots-initiated settlement of Otago.<sup>21</sup>

In Auckland province where kauri was the dominant timber species, ill-defined boundaries and locations allowed accidental or deliberate illegal cutting beyond the licensed block. Prosecution for illegal felling was threatened under the 1862 Crown Lands Act with fines of a maximum of £2 per tree where the diameter exceeded 30 inches. However, these provisions were not an effective deterrent as they were not policed.<sup>22</sup>

Illegal felling on Maori lands was a particular problem for the Auckland Provincial Government. In the 1840s the Crown had been ambivalent about prosecution if Maori did not complain. But in the 1870s Maori, especially from Northland, laid many complaints with the Superintendent. In 1873 he issued a notice in the *New Zealand Gazette* warning the public not to cut, fell, remove or contract for timber on lands where title had not been determined by the Native Land Court or on lands that the Government was engaged in purchasing.<sup>23</sup> This, in turn, provoked a mixed reaction among Maori. Some, like Te Haeru, countered that they alone had control of their lands. Others, like Kikipa, would not break contracts with sawmillers before the termination date. Pakeha settlers argued that a basic right was being denied themselves. Other Maori, like Te Matetahi, supported the Government's action because timber cutters destroyed Maori cultivations and fences. Subsequently in some areas Maori withdrew land and labour from the timber trade.<sup>24</sup>

On the Coromandel peninsula, the other large area of kauri forest, no complaints from Hauraki Maori about illegal cutting are noted by Roche. This may be because the Government and timber companies owned much of the forest lands.<sup>25</sup>

#### 12.4 Timber Floating Acts

Inland kauri logging, which developed when accessible coastal stands had been cut out, had the potential to cause problems because of one

21. Roche, *Forest Policy*, pp 25, 33-35

22. Roche, *History Forestry*, pp 51-53, *Policy*, pp 27-30

23. Roche, *Forest Policy*, p 30 (citing *New Zealand Gazette*, 8 December 1873)

24. Roche, *Forest Policy*, pp 30-32 (citing Auckland Province Superintendent's Inward Correspondence, AP 225/74, AP 315/74, AP 1311/74 and P W Hohepa, *A Maori Community in Northland*, Wellington, Reed, 1974, pp 39-42)

25. Stone, pp 25-26, 32-35

method used to get the logs out. When steep, winding or swampy terrain meant that track or tramway construction would be difficult or expensive, logs were transported by water in several stages to the mill. From the felling area, the logs were carried down to a river or the coast either by the natural swift flow of a creek in heavy winter rainfall (known as a freshet) or by releasing water in purpose-built dams. The logs were thus 'driven' to a river or the coast. Flat-bottomed scows, like that which Rini Tenetahi of Ngati Wai purchased,<sup>26</sup> had been used to transport logs around the coast



Freeing a jam of kauri logs with the aid of a 'bush devil', c 1900. Photographer Albert Percy Godber. From the Making New Zealand collection, photograph courtesy of the Alexander Turnbull Library (MNZ -1754-1/2)

26. See Chapter 11

but they were increasingly replaced by rafts. The logs were collected into holding areas or 'booms' before being chained together and rafted to the mill. Several types of problems emerged. As logs were released down creeks in heavy rainfall or by opening dams, they inevitably disturbed the banks and brought down rocks, soil and vegetation into the rivers. As well as causing the beds to silt up (causing flooding downstream with consequent damage to fences, buildings and paddocks), the rush of water and logs destroyed trees and plants on the river flats.<sup>27</sup> The log rushes could also kill fish and damage fishing pools. Booms, as a type of midwater wharf, caused other concerns. They could impede river flows and shipping while untethered logs were also a danger to shipping. There was also concern at the waste that could occur. Sometimes they lay rotting in a creek for months, even years. Logs could also float out and be lost at sea. It was problems caused by the driving creek rushes that eventually brought about legislation in the form of two Timber Floating Acts.

Legislation had originally been introduced in 1872 as the 'Tidal Creeks Floatage of Timber Bill' but this was withdrawn.<sup>28</sup> In 1873 the Government legislated to licence timber-floating and provide for compensation payments to landholders in the event of damage along river banks. The 1873 Timber Floating Act enabled a Provincial Superintendent to declare particular streams or rivers to be timber-floating waterways, and to grant licences to do so after the hearing of objections. The licensee was to ensure damage was minimal and that ordinary navigation continued. Landowners could claim only for damage directly caused by timber floating.<sup>29</sup>

From the Parliamentary debates, it seems that the genesis of the 1873 Timber Floating Act lay in the court case, *Mohi v Craig*. Craig was a timber cutter who was planning to drive his logs downstream which, as has been shown, had been done for several decades. Mohi owned a small piece of land at the mouth of the creek in question and had taken out an injunction to prevent Craig from driving his logs through the section of the creek on Mohi's land. Whether Mohi's land was customary land or his own freehold is not clear. The Judge upheld the injunction on the grounds that the creek on Mohi's land also belonged to him, as English law determined<sup>30</sup>, and that floating was not legal without legislation. The jury in the case called for legislation which 'would devise and carry into effect a measure calculated to repair such intolerable wrong.'<sup>31</sup> The Timber Floating Act, 1873 was the Crown's response. Presumably the jury saw

27. A H Reed, *The Story of the Kauri*, Wellington, A H & A W Reed, 1953, Chaps 15-20

28. Robert McClean, 'Eastern Coromandel Foreshore, Fisheries and Coastal Report', Report on the Wai 110 claim, Wellington, 1999, p 47

29. Flora and Fauna Legislation Database 1840-1912 (WTD in future references) Timber Floating Act, 1873, ss 2, 3, 4, 5

30. Cathy Marr, 'Crown-Maori Relations in Te Tai Ihu: Foreshores, Inland Waterways and Associated Mahinga Kai', Treaty of Waitangi Research Unit, December 1999, p 33

31. D Pollen, 17 September 1873, NZPD, 1873, vol 14, p 1172, called Floatage of Timber Bill; Report of the Select Committee on the Timber Floating Bill, AJHR, 1873, vol 3, 1-2, p 4

the 'intolerable wrong' to lie with an individual's being able to hinder an important national industry.

Without researching contemporary Auckland newspapers, it is not possible to give details of the date, the area in which this occurred or further reports of the case. Robert McClean notes another court case which occasioned the 1872 Bill, in which the Supreme Court had found in favour of Harris against MacFarlane, who wanted to float timber down the Whangapoua River. Harris had purchased the bed of Waitekuri Creek from Mohi Mangakahia in order to block the logging operations of MacFarlane. Mangakahia had supported this action in order to protect eel weirs along the river.<sup>32</sup>

Of all the Acts specifically relating to forestry the 1873 Timber Floating Act was the only one on which Maori MPs spoke during the parliamentary debates. Even though Maori had been involved with driving logs in the industry, the Bill clearly caused Maori MPs much concern for a number of reasons. Wiremu Parata from Western Maori relayed the anxieties of many Maori, who had sent him petitions, that the Act would deprive them of rights over streams on their lands. While he could see no problem with floating logs down large creeks, Parata wanted an amendment to the Bill to restrict the building of dams on small creeks because of the damage they would cause to property and houses. He also asked for the Bill to be postponed until the next session for further consideration. H. V. Taiaroa of Southern Maori also wanted the Bill held over. Karaitiana Takamoana of Eastern Maori reiterated and added to the points made by Parata. He too mentioned the number of petitions from Maori who owned kauri forests. If the Bill was passed, he said, they would not want to sell to Europeans because of the destruction which would be caused. 'Land would be washed away by the water, and eel-weirs destroyed.' He also touched on the question of individual rights and the disparity in the treatment of rights by the Crown for Europeans and Maori. The timber floating bill was brought in to benefit an individual, he said and, from the name of the court case we know this was Craig, a European. But, continued Takamoana, the Government had not investigated another matter of concern to the Maoris. This was the diversion of water by Europeans when they bought land from the Government. He instanced his own case where a mill had been left standing dry after the water, which turned it, had been diverted by Europeans.<sup>33</sup>

32. McClean, p 47 (citing NZPD, 1872, p 405; Anderson, R, 1997, p 274 but McClean had not found a copy of the Supreme Court decision; Peter McBurney, p 15)

33. W Parata, K Takamoana, H V Taiaroa, 10 September 1873, NZPD, 1873, vol 14, pp 1006-09

In the Legislative Council, Wi Tako Ngatata of Wellington argued that the Bill should be translated into Maori and the translation circulated amongst the peoples of Hauraki, Kaipara, Hokianga and other places where kauri grew and who leased the timber. 'Let the people upon whose land these streams were be made acquainted with the Bill, lest it be like the Treaty of Waitangi, and the Natives of this Island would not understand it.' Holding the Bill over until the next session, Ngatata suggested, would give time for Maori people to understand it.<sup>34</sup>

The Maori MPs were supported in their concerns by a number of Pakeha MPs. The Member for Parnell, R.G. Wood, followed Parata and Takamoana in requesting that the Bill be held over for consideration since 'the Premier was pressing this Bill on somewhat hurriedly.' He gave examples of the damage and waste that could occur from driving logs. A market-gardener, who grew crops and fruit trees on a small piece of level ground in the loop of a creek, had them completely ruined when logs and water rushed over them. Nor did the market gardener receive any compensation as his case was thrown out by the Magistrate. Wood also mentioned the numbers of logs which rotted or were carried out to sea. Driving might be cheaper for the sawyer but not an economical way to use timber. Roads and tramways, he argued, were a simpler solution.<sup>35</sup>

In promoting roads and tramways, Wood followed William Swanson of Newton. Swanson, who had had experience with logging around Auckland province, advocated roads and tramways at the Select Committee on Timber Floating. In the parliamentary debate, Swanson also wanted to clarify his evidence to the Select Committee because he believed he had been misrepresented by the Chairman, Julius Vogel, and by another witness, the sawmiller John MacFarlane, who testified for floating. Alfred Brandon, the MP for Wellington Country District, supported the 'Native members' in calling for the postponement of the Bill. He argued that the practice of sending logs down rivers would tend to dam them as some of the logs would become embedded unless provision was made for their removal. He cited Canadian and other legislation which gave local Boards the power to protect all parties located on river banks.<sup>36</sup>

In the Legislative Council, Henry Sewell of Wellington also supported an extension of time for the Bill's passage as he queried the mechanisms for the payment of compensation and, germane to the Maori viewpoint, property rights in waterways. It seemed to Sewell, 'that no license to use those streams which flowed through Native land should be issued except

34. Wi Tako Ngatata, 22 September 1873, NZPD, 1873, vol 14, p 1263

35. R Wood, 10 September 1873, NZPD, 1873, vol 14, pp 1007-1008

36. William Swanson, John MacFarlane, Timber Floating Select Committee, pp 2,3; William Swanson and A Brandon, 10 September 1873, NZPD, 1873, vol 14, p 1007-1008

with the consent of the Native proprietors, otherwise it would be an authorization of the use of the waters in a manner inconsistent with the proprietary rights guaranteed to such owners.' W.D.B.Mantell from Wellington wanted provisions to protect 'the interests of the Native race'. In response to a comment from Daniel Pollen, the Member for Auckland, that Maori could argue their case in the Auckland Provincial Council, Mantell pointed out that Maori were not represented there. W.D.H.Baillie, from Marlborough, also discussed the private property aspects, providing further examples of property damage as a consequence of timber floating.<sup>37</sup>

Proponents of the Bill argued that the timber industry was too important to the country to be delayed, and that MPs should pass the Bill forthwith since it acknowledged landholders' rights and made provision for compensatory damage if necessary. As Vogel stated in the Select Committee Report, 'The Committee are of opinion that the power possessed by lower holders on the banks of a creek, to obtain an injunction to prevent the floatage of timber by upper holders, is liable to be abused, to the injury of a most important industry.' As proof of abuse, C.J.Taylor, from Auckland, cited a recent Supreme Court case where damages of £5000 were claimed but only the token of one farthing was awarded.<sup>38</sup>

Of Maori concerns, Vogel acknowledged that there were Maori petitions against the Bill, but on the basis of the evidence of Major John Wilson to the Select Committee, Vogel implied the petitioners were victims of misinformation. Wilson had made a statement describing a conversation with Te Waharoa and Te Raihi. They, Wilson had stated, had been told by Karaitiana and some Europeans that the Government wished to take their rivers from them by this Bill. The Government, said Vogel, was certainly not going to take the rivers from Maori and the Bill provided the owners of land on banks of creeks with an easy and speedy method of obtaining compensation for any damage caused by timber floating. Thomas Fraser of Otago, citing a report from Major Heaphy, also argued that the Bill would not affect Maori lands. Vogel summed up the proponents' general position saying: 'It was quite clear that, up to within the last few months, no attempt had been made to stop this industry, which for many years had been carried on under the impression that it was perfectly legitimate to use the creeks for the purpose of floating timber, until a Court suddenly intervened to stop this use of the creeks, to the most serious damage of [the] industry'.<sup>39</sup>

37. Henry Sewell, 17 September 1873, W Mantell and W Baillie, 22 September 1873, NZPD, 1873, vol 14, pp 1172, 1263-1264

38. Timber Floating Select Committee, p 1; C.J.Taylor, 17 September 1873, NZPD, 1873, vol 14, p 1173

39. Julius Vogel, 10 September 1873, NZPD, 1873, vol 14, p 1009-1011; Timber Floating Select Committee Report, pp 1, 8; Thomas Fraser, 17 September 1873, NZPD, 1873, vol 14, p 1173

Given that proponents of the 1873 Timber Floating Act required it quickly, it seems unlikely that it was translated into Maori. Its successor, the Timber Floating Act, 1884, certainly was not translated at the time.<sup>40</sup> The 1884 Act fine-tuned the provisions of the earlier Act, allowing for dams, and imposing more stringent conditions on licensees in the application process. It also refined the compensation process for landowners whose lands were damaged, while empowering log owners to reclaim logs from lands beside rivers and streams. The construction of booms was to come under the Harbours Act of 1878. Unlike the 1873 Bill, no Maori MP spoke on the 1884 Bill.<sup>41</sup>

But a petition presented to the Native Affairs Committee in 1886 articulated Maori concerns with the 1884 Timber Floating Act. Huirama Tukairiro and others complained that booms placed in the creek at Mr Roberts's sawmill at Mangonui, interfered with the navigation of the creek. They must also have mentioned the fact that the Act had not been translated into Maori, as the Committee recommended this be done immediately. On the main grievance, the Committee recommended that the Native Agent in the district inspect every case of timber obstruction and take action to have it cleared. In reaching this decision the Committee stated that the booms had been erected in 1884 and were essential to the proper working of the timber-trade in the area. Navigation inconvenience had not been great but could become so if timber was not cleared away promptly.<sup>42</sup>

This petition in 1886 was not the first from Maori with grievances about the effects of constructions used in timber floating. After the Waiwawa boom was built in Mercury Bay in 1883, Maori in the area twice petitioned and wrote letters about the problems it was causing them.<sup>43</sup> Even though the boom had been modified to allow craft to pass through, Peneamene Tanui and others stated that, during freshets which occurred every six weeks or three months, they could not go out to fish. In addition, the kauri logs wore away the soil and exposed ancestors' bones. Although the Native Affairs Committee requested that the grievance be investigated and remedied, little was done to relieve it so that Tanui wrote a letter to the Native Department in 1884. This letter was referred to the Marine Department for investigation as the construction of booms came under the 1878 Harbours Act. The Marine Department officer admitted that the boom was closed during freshets but dismissed the letter saying that he was told Tanui had no interest in land likely to be affected by the boom.<sup>44</sup>

40. Petition of Huirama Tukairiro and others, Nos 366, 1885 and 156, 1886, AJHR, 1886, vol 4, I-2, p 14

41. WTD, Timber Floating Act, 1884, ss 5, 3, 4, 6, 7, 13

42. Petition of Tukairiro, p 14

43. McClean, pp 49-57

44. McClean, pp 50-53 (citing Petition of Peneamene Tanui and others, Whitianga, 6 July 1883; Sec MD to Sec MBTC, 17 October 1883; Sec MBTC to Sec MD, 24 October 1883; Peneamene Tanui to Mr Lewis, MD, 2 February 1884; David, MD to Lewis Native Dept, 20 February 1884; all in M 1 4/468, NA Wellington; Native Affairs Committee, 2 August 1883, Le 1 1883/8 NA Wellington)

However the boom had not been authorised under the 1878 Harbours Act. This necessitated a new application from the timber company owners under the 1884 Timber Floating Act. As required by this Act, the application had to be advertised. This was done through a newspaper advertisement, letters in English to local residents who were mostly Maori, and a notice at the site. A number of Maori petitioned within the time allotted, and Tanui again wrote. Pakeha land owners also protested. But the application was approved.<sup>45</sup>

In the early 1900s residents, including some Maori, further up the Waiwawa River protested about timber company operations which caused siltation and obstructions in the river so that it became unnavigable. Discussions about clearance between Government departments, local bodies and the timber companies continued until 1924 but, despite the apparent stringencies of the 1884 Timber Floating Act, no work was done or penalties imposed.<sup>46</sup> As kauri and other timber production peaked at 432,032,000 sawn feet in 1907 and, as water-born transport of logs was replaced by tramways, navigation problems and damage to property from timber floating would have lessened and eventually ceased. But in the meantime, the effects of siltation and of obstruction were considerable, as protestors described.<sup>47</sup>

As kauri forests were felled, loggers moved into the podocarp forests in the central interior of the North Island. These operations will be discussed shortly. In 1840 half of New Zealand had been covered by forest.<sup>48</sup> An inventory of national forests undertaken by Arnold Hansson, Chief Technical Officer of the State Forest Service, between 1921 and 1923 showed that by that time nearly 20 percent or 12.5 million acres could be classified as forest land.<sup>49</sup> Of that, perhaps only 100,000 acres were planted in introduced exotics<sup>50</sup>, an activity which will be discussed in the next section. In 80 years, 30 percent of New Zealand had been transformed from forest to grass. Maori played a part in this transformation having decided, sometimes under financial duress, to sell indigenous timber on their lands. They received an income but often, seemingly, they were prevented by the Crown from obtaining the full market value of their forests. The latter point will be discussed in the final section on Maori involvement with forestry.

45. McClean, pp 53-56, (citing *New Herald*, 7 and 8 January 1885; Notices to Whitianga Residents, 6 January 1884 (sic); Petition from Whitianga Maori, 5 January 1885; Peneamene Tanui and others to Sec MD, 5 January 1885; Mackay to Sec MD, 13 January 1885; all in M 1 25/408, NA Wellington)

46. McClean, pp 57-65

47. Roche, *History Forestry*, pp 104-105

48. Roche, *Forest Policy*, p 19

49. Roche, *History Forestry*, p 184

50. Roche, *Forest Policy*, Figure 3.2, p

## 12.5 Introduced Tree Planting

Given the extensive felling of indigenous forests, Acts of Parliament to encourage tree planting during the 1870s may seem paradoxical. The policy of planting originated in Canterbury Province where, because of its relative treelessness, afforestation was initiated through incentives being offered under the 1858 Planting of Trees Ordinance soon after the province's settlement. Otago, too, supported tax exemptions and land grants for private tree planting. Canterbury investigations into forestry were endorsed in a report by a Joint Committee on Colonial Industries in 1870.<sup>51</sup> These actions led to the Forest Trees Planting Encouragement Act of 1871. Under this Act two acres of Crown land were offered to individuals for every acre of their land they planted in forest trees if the total area planted was between 20 and 250 acres. Conditions included exclusive use of the land for forestry for at least two years, that areas of trees were fenced and that the trees were healthy. The 1872 Amendment Act altered the incentive scheme from grants of Crown land to land orders which enabled the planter to buy Crown land within two years. It also allowed the cultivation of root crops on forest land. The Act was further amended in 1879 to allow local bodies to take advantage of the Acts' provisions on lands they owned or administered.<sup>52</sup>

Although the Act does not specify afforestation with introduced species, that was nevertheless the intention based on the past twenty years' experience in Canterbury. There were a number of reasons why settlers associated plantation forestry with introduced species. In Europe tree planting with selected species was undertaken for shelter, climatic amelioration, fuel, timber and aesthetics. Settlers were keen to acclimatise these species for reasons of nostalgia and familiarity, as part of 'the Britain of the South' ideal. During the debate on the 1871 Tree Planting Act, J.B.A. Ackland of Canterbury spoke of planting elm, ash and oak.<sup>53</sup> But settlers also experimented with species from other continents. The Australian blue gum was praised because it adapted well, grew rapidly, and was a good serviceable timber for firewood, posts and rails.<sup>54</sup> Some settlers experimented with indigenous trees. But the general opinion, encouraged by contemporary scientific theories, was that New Zealand flora, like its birds and peoples, was doomed to extinction, displaced by stronger northern hemisphere stock. Indigenous trees were thought to be slow-growing and difficult to propagate. T.H. Potts and a few others per-

51. Roche, *Forest Policy*, p 49 (citing Report of the Joint Committee on Colonial Industries, AJHR, 1870, vol 2 F-1, pp 1-29)

52. Roche, *Forest Policy*, pp 43-54; Roche, *History Forestry*, p 90; WTD, Forest Trees Planting Encouragement Act, 1871, ss, 3, 5; Forest Trees Planting Encouragement Amendment Act, 1872, ss 4, 2; Forest Trees Planting Encouragement Amendment Act, 1879, ss 4, 5

53. J B A Ackland, 8 November 1871, NZPD, 1871, vol 11, p 919

54. W B D Mantell, M Holmes, 8 November 1871, NZPD, 1871, vol 11, pp 918-919

sisted with indigenous species, using methods to approximate the trees' natural environments of shade and moisture but their efforts were disregarded.<sup>55</sup>

In Canterbury planters had kept records of the progress of the wide variety of European, North American, and Australian species they planted. *Pinus radiata*, then classified as *Pinus insignis* and commonly known as Monterey Pine, was found to adapt particularly well. Used widely for shelterbelts in Canterbury, *Pinus radiata* was considered to grow rapidly but to produce inferior timber. However, research into the species by Thomas Adams in the early twentieth century was picked up by the botanist and Director General of Agriculture, Alfred Cockayne, son of the eminent botanist Leonard Cockayne. In a separate report at the time of the 1913 Royal Commission on Forestry, Cockayne, with considerable prescience, championed *Pinus radiata* as 'the tree of the future'.<sup>56</sup>

The Forest Trees Planting Encouragement Act 1871 was repealed by the State Forests Act 1885. The system of land orders had become unwieldy especially after the abolition of provincial government in 1876. However, throughout New Zealand, large and small landowners made claims under the Act, having planted 3,797 acres, 2,933 of which were in Canterbury.<sup>57</sup> Whether Maori availed themselves of the incentives is unknown. The Act was unlikely to have been translated but Maori may have considered their indigenous forests sufficient for the foreseeable future.

Even without the land grant incentives, landowners, particularly in Canterbury, Otago and Auckland provinces, continued to plant private forests. By 1919 the total area of exotic forests had expanded to 60,000 acres.<sup>58</sup> But in the 1890s, under the Liberal government, the State also began to plant forests of introduced trees. By this time, there were additional reasons for planting which included concern at the waste involved with indigenous tree felling and fears of a timber famine.<sup>59</sup> In 1897 it established a forestry branch of the Lands Department and a year later began planting what became a wide range of species. State nurseries were established in Otago and at Whakarewarewa near Rotorua. By 1909 State plantations totalling 12,175 acres were established in Otago, Canterbury, Marlborough, Rotorua and North Auckland.<sup>60</sup>

55. Roche, *Forest Policy*, pp 44-45

56. Roche, *Forest Policy*, pp 46-48 (citing A H Cockayne, 'Monterey Pine – The Great Timber Tree of the Future', *New Zealand of Agriculture*, vol 8, no 1, 1914, pp 1-26)

57. Roche, *Forest Policy*, pp 51-54

58. Roche, *Forest Policy*, p 57

59. See below

60. Roche, *Forest Policy*, pp 57-66, (citing Report of the Timber Conference, AJHR, 1896, H-24, pp 1-54; Report of Royal Commission on Forestry, AJHR, 1913, C-12, pp 1-87)

## 12.6 Indigenous Forest Reservation and Conservation

In the later part of the nineteenth century various governments made attempts to reserve indigenous forest through major pieces of legislation. These also created institutions to scientifically manage the forest rather than merely fell it. By scientific management, its advocates meant the conversion of tracts of natural forest into blocks of timber trees of similar ages capable of being worked in rotation, under working plans. This would allow sustained use of the forest. Cleared areas would be left to regenerate and stands would be cut to provide a continuous supply of timber.<sup>61</sup> The main ecological argument today against similar forestry proposals is that the forest will no longer contain old, large trees which are important habitats for forest birds.

The conservation of kauri forest was first proposed in March 1840 by Captain William Symonds, Surveyor of the Royal Navy and a member of the New Zealand Association. Symonds urged the assessment and reservation of suitable areas before European settlement began in earnest. His main reason was to prevent waste in order to conserve kauri for the Royal Navy. Given settlement imperatives to clear forest, Symonds' report received qualified support from Lord John Russell. He appointed Symonds' son William, already deputy surveyor-general, to the position of conservator of kauri forests. However, the latter drowned later in the month of his appointment and the position lapsed. Governor Hobson stated his intentions to preserve areas of kauri forest for naval use and to prosecute those misusing the forest but these, too, appear to have not been given effect to. In any case, there were no effective means of policing the misuse.<sup>62</sup>

Further examination of the idea that forest areas should be reserved for future use came about from the late 1860s because of dissatisfaction with the inefficiency and waste engendered by the licensing regulation system for timber. In 1867 and 1868 the Otago Provincial Council was to the forefront in this examination because of its timber scarcity. It proposed 'bush reserves' which were to reserve portions of Crown forest in all locations for future use and to facilitate greater efficiency through an auction system of leasing blocks for felling and price fixing of the sawn timber. However the Council failed to pass the resolutions.<sup>63</sup> Also in 1868 T.H.Potts, the Member for Mt Herbert, proposed a motion in the House of Representatives that it take steps to ascertain the condition of the Colony's forests with a view to their better conservation. Potts argued that

61. Roche, *Forest Policy*, p 82

62. Roche, *History Forestry*, pp 21-23, (citing *New Zealand Gazette*, 3 November 1841)

63. Roche, *Forest Policy*, pp 69-71

timber supplies were not only adversely affected by timber licensing and losses through fire, but also that forest destruction could cause climatic modification and flooding. He believed the Hutt River near Wellington had changed since settlers commenced clearing. Such arguments were innovative at the time in New Zealand and Potts supported them with evidence from earlier New Zealand scientific writing, and the 1864 book by the American George Perkins Marsh, *Man and Nature*. Highly influential in its day, Marsh's theme was that human beings must learn to understand their environment and how they affect it in order to prevent wasteful and detrimental land practice.<sup>64</sup>

Potts' motion resulted in information being collected from Provincial Superintendents by James Hector, Director of the Geological Survey and of the New Zealand Institute. Hector requested a detailed assessment of all remaining forests. He also asked for the Superintendents' opinions of the management systems of reserves and licensing. In their responses, two provincial superintendents remarked on Maori actions. From Whangarei, J.J. Wilson noted: 'No bush licences granted in this district, except by Native owners....and I suppose I need not make any suggestions for the good of the Native owners, as to how they should administer their bush estates; it would be useless, as they do not receive any hints from the Government, or through them, whatever they might do from a private individual.' This somewhat cryptic comment seems to argue a certain Maori independence from Government department advice or suggestions. From Hawke's Bay it was noted that 9,000 acres of forest on Native land had been destroyed to obtain fresh or sheltered lands for their cultivations. 'Formerly the Maoris destroyed large portions yearly, but of late they have done so rarely, especially in the settled districts.' Hector's questions and the provincial replies were published the following year.<sup>65</sup>

By 1869 reserves had been gazetted under provincial regulations only in the provinces of Auckland, Canterbury, Otago and Southland to provide sources of timber for the future.<sup>66</sup> In the next decades, in the debates surrounding forest reservation, other reasons were advanced. Nelson Province reserved forest in mountain ranges and river headwaters as a means of flood protection downstream.<sup>67</sup> In 1875 Taranaki Province reserved forest and mountain land within a 5-mile radius around the summit of Mt Egmont/Taranaki, principally for meteorological reasons as it was then thought that natural forests could help maintain rainfall levels. The local newspaper approved the reservation for aesthetic reasons as

64. T H Potts, 7 October 1868, NZPD, 1868, vol 4, p 188; George Perkins Marsh, *Man and Nature*, (ed) David Lowenthal, Cambridge Massachusetts, Belknap Harvard Press, 1965, p xxvii. Today, the positive correlation between forest cover and rainfall is not thought to be so strong.

65. Roche, *Forest Policy*, pp 71-74; The Present Condition of the Forests of New Zealand, AJHR, 1869 D-22, pp 3,14,11

66. Roche, *Forest Policy*, Table 2.1, p 24

67. Roche, *Forest Policy*, p 40

well. This reservation was extended to a 6-mile radius in 1881, so that an area of 29,292 hectares was made forest reserve. It became the core of Mount Egmont National Park, gazetted in 1900, which also included 2,400 hectares of the Kaitake Range. The only speaker on the Egmont National Park Bill was W.C. Walker of Canterbury in the Legislative Council. He believed the forest would 'be one of the great features of the country for all time'. While Maori MPs did not speak during this debate, their opinions on scenic reservation, especially if Maori land was taken, have been discussed in Chapter 11.<sup>68</sup>

Further questions were raised in Parliament in the early 1870s by Charles O'Neill, MP for Goldfields. He was particularly concerned with timber supplies in view of the immigration and public works programme instituted in that decade by the then Colonial Treasurer, Julius Vogel. O'Neill suggested a Royal Commission should enquire into forests, similar to that undertaken by the Government in Victoria. While this proposal was not agreed to, the Conservation of Forests Bill was prepared in 1873 which proposed a number of methods to more efficiently exploit the forest resource. The Bill lapsed for want of time but was replaced the following year by the more comprehensive and innovative, albeit short-lived, New Zealand Forests Act 1874.<sup>69</sup>

This Act provided for a ministry of State Forests to be managed by a Conservator of Forests and two assistants under a Minister called the Commissioner of State Forests. It established a State Forests Fund to acquire and manage inalienable forest reserves, and to establish a forestry school and nurseries. The Bill had proposed that the forest estate be selected by the Commissioner from up to three percent of each province's forests although agricultural lands or goldmining areas were excluded. But this was rejected by the House. The final version of the Act allowed Provincial Superintendents to request their governments to set aside areas as forest reserves.<sup>70</sup>

The 1874 Bill was introduced by Vogel who was Premier at the time and a recent convert to scientific forestry. He envisaged that a publicly-owned forest estate would contribute to national development and Government revenue as another plank in his immigration and public works programme. Between the Parliamentary sessions of 1873 and 1874 and after a tour of the South Island where he saw for himself the inroads caused by demand for timber and the consequential environmental damage, he undertook a number of investigations into forestry as had been recom-

68. Roche, *Forest Policy*, p 39; W W Harris, 'Three Parks: An Analysis of the Origins and Evolution of the New Zealand National Parks Movement', MA thesis, University of Canterbury, 1970, pp 37-39; John Cobb, *The Story of Egmont National Park*, Egmont National Park, Department of Conservation, [nd], p 109; Egmont National Park Act, *Statutes of New Zealand*, 1900, pp 498-503; W C Walker, 18 October 1900, NZPD, 1900, vol 115, p 410

69. Roche, *Forest Policy*, pp 71-75

70. WTD, The New Zealand Forests Act 1874, ss 4, 5, 2, 3, 6

mended in the 'Report of the Committee on Colonial Industries'. The Governor, Sir James Fergusson, who had previously served in India which was then the hub of Imperial forestry, gave him information on American timber legislation and a report by Captain J. Campbell-Walker on forest management in Germany, Austria and Britain.<sup>71</sup> Scientific forestry had been developed in Europe and, from the 1860s, German foresters had been employed in India.<sup>72</sup> Campbell-Walker had wide-ranging experience as a forester in India and was to be appointed New Zealand's first Conservator in 1875. Apart from the reports from Fergusson, Vogel also obtained information from other British colonies and Europe, which was tabled at the time of the Bill.<sup>73</sup>

In introducing the Bill, Vogel commented on such points as the importance of preserving forests, consequences of their destruction, the fallacy of their inexhaustibility, and forestry techniques and legislation using overseas examples. To illustrate the New Zealand situation he used Hector's deforestation estimates, and suggested that remaining Crown lands offered New Zealand a chance to establish State Forests which would be 'used for the good of the country as a whole'. He announced an annual grant of £10,000 for the work of the ministry.<sup>74</sup>

While some speakers supported the Bill, others challenged the validity of Hector's deforestation estimates, the financial arguments, and the reliance on overseas evidence, expertise and theoretical science. John Sheehan, MP for Rodney, used displacement theory to disparage any attempt to reserve indigenous forest. He explained that: 'The same mysterious law which appears to operate...by which the brown race, sooner or later, passes from the face of the earth – applies to native timber....The moment civilization and the native forest come into contact, that moment the forest begins to go to the wall'.<sup>75</sup>

But the main argument against the Bill had less to do with forestry than with the rights and autonomy of the provinces. The Bill, said William Fitzherbert, Superintendent of Wellington Province and MP for Hutt, aimed to take land from the provinces and had 'nothing to do with forestry except as a shadow'. Consistent with this view, W.W. Harris argued in his 1970 thesis, 'Three Parks: An Analysis of the Origins and Evolution of the New Zealand National Parks Movement', that Egmont/Taranaki forest was reserved to forestall any central Government acquisition.<sup>76</sup> Another argument in the 1874 debate saw the Bill as an attack on individual rights in an age of laissez-faire. The theme that, 'The settlers should

71. Roche, *Forest Policy*, p 76 (citing Governor's Miscellaneous Correspondence G 13/4 No 38, No 43 and Legislative Department LE 1/1874/133, NA Wellington)

72. Roche, *Forest Policy*, p 80

73. Roche, *Forest Policy*, pp 76-77, (citing IA Conservation of Forests 1/1874/1356, NA; Parliamentary Debates and Resolutions. The Forests of the Colony, AJHR, 1874, H-5, pp 1-73)

74. Graeme Wynn, 'Conservation and Society in Late Nineteenth-Century New Zealand', *New Zealand Journal of History*, vol 11, no 2, 1977, p 126 (citing Julius Vogel, NZPD, 1874, vol 16, p 92)

75. Wynn, p 129 quoting J Sheehan, NZPD, 1874, vol 16, p 351

76. Harris, p 38

be let alone, for in forestry as in most commercial matters, private management would be more effective and less expensive than government control', was maintained by several speakers.<sup>77</sup> This line could also have been taken in relation to Maori forests, whether under customary or Crown-granted title, but no Maori MPs spoke on the Bill.

Campbell-Walker was appointed Conservator of Forests in 1875 and, with botanist Thomas Kirk, spent some seven months touring major forest areas in both islands to gain an understanding of New Zealand climate, timbers, forest attributes and public feeling towards State forestry. In his subsequent report, Campbell-Walker emphasised the systematic management of indigenous forests to meet future timber supplies, and the reservation of forests in catchment areas to protect against flooding and ameliorate the climate. He justified State involvement in scientific forestry because of the latter's large-scale and long-term nature.<sup>78</sup> Campbell-Walker did not inspect Maori-owned forest in any detail. However, he remarked on the fine totara forests in the Rotorua district and on the Napier to Taupo Road and recommended that they be 'acquired', presumably by the Crown, and conserved.<sup>79</sup>

However, State forestry, as envisaged in the Act, did not proceed. Vogel left New Zealand in 1876 to be Agent-General in London. The New Zealand Forests Act Repeal Bill was introduced in 1876 and, although it was rejected by the Legislative Council, no funds were voted for State Forests. Campbell-Walker was not reappointed and left New Zealand in 1877.<sup>80</sup> After the abolition of provincial government in 1876, a new Land Act was passed in 1877. Although primarily intended to regularise the diverse provincial laws, it made provision for the Governor to declare forest reserves and to appoint rangers to regulate their use.<sup>81</sup> In the Legislative Council debate on this Bill, George Whitmore, from Hawke's Bay, considered the Bill's provisions to be useful based on some of Campbell Walker's recommendations.<sup>82</sup> By 1881 over 200 reserves of some half million acres were gazetted throughout New Zealand. Scientific State forestry continued to be advocated by a retired French forester living in Wellington, A. Lecoy, who was asked by John Ballance, Minister of Lands, to prepare a report.<sup>83</sup>

The reservation of indigenous forests and its association with State scientific forestry was resumed in the next decade when Vogel returned to New Zealand in 1884 and took office as Colonial Treasurer in the Stout-Vogel ministry. From Britain he had forwarded papers and reports on for-

77. Wynn, pp 130-131, (citing Mr Buckland, Mr Gibbs, Mr T Kelly, Mr Hunter, NZPD, 1874, vol 16, pp 403, 358, 407, 411 respectively). See also Graeme Wynn, 'Pioneers, Politicians and the Conservation of Forests in Early New Zealand', *Journal of Historical Geography*, vol 5, no 2, 1979, pp 171-188; Roche, *Forest History*, pp 85-87

78. Roche, *Forest Policy*, pp 80-88, (citing Campbell-Walker's Report of the Conservation of State Forests, AJHR, 1877, C-3, pp 1-59)

79. Campbell-Walker, Report, pp 4-6

80. Roche, *Forest Policy*, pp 88-91 (citing the New Zealand Forests Act Repeal Bill, NZPD, 1876, vol 22, pp 582-584, called the State Forests Bill); Wynn, 'Pioneers', p 185

81. Land Act 1877, Part 5 Forests

82. G Whitmore, 1 December 1877, NZPD, 1877, vol 27, p 605

83. Roche, *Forest Policy*, pp 91-92; Harris, pp 44-45; A.Lecoy, Papers Relating to Suggestions on Forests in New Zealand, AJHR, 1880, H-3, pp 1-12

est topics to the New Zealand Government, and in 1884 Kirk was engaged to report on forests and the timber industry. Although his report was not published until 1886, Roche suggests Kirk's findings contributed to Vogel's State Forests Act, 1885.<sup>84</sup> Kirk examined indigenous forests throughout New Zealand, estimating the amount remaining under different ownerships, listing prices obtained by owners from millers, and looking at Maori involvement in forestry. The latter will be discussed in the final section of this chapter.<sup>85</sup>

The 1885 Act restored many of the facets of the 1874 Forests Act, and without provincial government antipathy, the reservation of forested land was much more feasible. The Governor was enabled to reserve any Crown lands, under which three classes of forest reserves were identified: climate, mountain and level, that is areas to a defined altitude above which mountain forest reserves were located. Forest conservators were to be appointed under a Minister, and a School of Forestry and Agriculture established.<sup>86</sup> The Act focused on scientific forestry of the indigenous rather than exotic afforestation. Arguments against the Bill focused on the familiar themes of displacement theory and how the retention of forests was antithetical to settlement. Maori MPs did not speak when the Bill was before Parliament. The Act was passed but once again retrenchment during the severe depression of the late 1880s led to the effective disestablishment of the State Forests Department organised under Kirk, its Chief Conservator, in 1887.<sup>87</sup>

The next decades saw settlement imperatives increasingly take precedence over forest reservation. Under the Liberal ministry from 1891 until the Reform Party took office in 1912, three million acres of Maori land were bought by the Crown to open up for settlement. Much of this land was forested.<sup>88</sup> Despite the gazetting of some new forest reserves, and a Lands Department policy of 1903 to reserve sections of bush in new settlement blocks, earlier forest reserves were revoked. Under the 1888 State Forests Amendment Act, forest land which had been reserved under the 1885 State Forests Act, could have its reserve status revoked by Parliamentary motion.<sup>89</sup> Between 1890 and 1920, some 600,000 acres mostly in Southland were revoked. Land Act provisions required settlers acquiring land under deferred payment schemes to clear a proportion of forest annually. Settlement needs thus swept aside previous arguments for forest retention such as soil conservation and climatic amelioration. It was thought that tree planting could provide future timber supplies. Even

84. Roche, *History Forestry*, p 93; State Forests Act, 1885, *Statutes of New Zealand*, 1885, pp 70-77

85. T Kirk, Report on Native Forests and the State of the Timber-Trade, AJHR, 1886, C-3, pp 1-25

86. WTD, New Zealand State Forests Act, ss 3, 6, 7, 12-15, 23, 24

87. Roche, *History Forestry*, pp 93-96 (citing Rolleston, Buckland, Beetham, Ballance, NZPD, 1885, vol 51, pp 205-209)

88. Roche, *History Forestry*, p 137; Michael King, 'Between Two Worlds', in *The Oxford History of New Zealand*, (ed) W H Oliver with B R Williams, Wellington, Oxford University Press, 1981, pp 284-285

89. WTD, State Forests Act Amendment Act, s 2

conservationist H.G.Ell, who criticised the use of forest reserves for agriculture in 1902, couched his arguments in terms of land speculation rather than settlement per se.<sup>90</sup> But Ell saw that forest could be reserved for diverse reasons. At the time when scenery reserves were being gazetted for tourism as Chapter Eleven showed, he called for an area of kauri forest to be protected as a tourist attraction<sup>91</sup> and suggested permanently securing representative areas of different types of indigenous forest. He reiterated the latter before the Royal Commission on Forestry in 1913.<sup>92</sup>

On the disestablishment of the State Forests Department in 1887, administrative responsibility for Crown forests came under the various regional Commissioners of Crown Lands. The exact acreage of Crown forest at that date is difficult to determine. Kirk's 1886 Report identified some 10 million acres of Crown reserve but he did not give a figure for Crown forest reserves in Otago, Canterbury and the central North Island. Crown forests could be designated under both the 1885 Lands Act or the 1885 State Forests Act. In 1908 forest legislation was consolidated in the State Forests Act.<sup>93</sup>

In 1897 a forestry branch was established in the Lands and Survey Department. This branch was more for the purpose of afforestation, particularly with introduced tree species, than with the reservation of indigenous trees.<sup>94</sup> A number of reasons led to the State's resuming its involvement with forestry a decade after its previous official withdrawal. One was the recognition that indigenous forests were not inexhaustible and were destined to be cut out in 40 to 50 years time.<sup>95</sup> A second was the belief that it was useless to try to save indigenous forests for timber purposes because they were being destroyed by accidental fires in the process of clearing for settlement. These points had been expressed at a Timber Conference in 1896 of sawmillers who were concerned about the future of their industry. George Perrin, Conservator of State Forests, Victoria, also attended this conference and expressed concern to the Government at the waste of forest caused by fires.<sup>96</sup> The Government's response was to create the forestry branch of the Lands Department. The Government accepted the recommendation of the Forestry Committee of the Timber Conference to begin planting lands unfit for settlement, especially in treeless areas or where there was little indigenous forest. By 1911 State afforestation was concentrated on exotic species as they were faster growing and less demanding of conditions than indigenous species.<sup>97</sup>

90. Roche, *History Forestry*, pp 137-142, (citing Lands Department Circular No 586 of 3 August 1903, Roche, *Forest Policy*, pp 96-99)

91. David Thom, *Heritage: The Parks of the People*, Auckland, Landsdowne Press, 1987, p 105

92. M M Roche, *Acquisition, Design, and Management of Scenic Reserves in New Zealand: A Geographical Perspective*, Wellington, Department of Lands and Survey, 1981, p 19

93. State Forests Act, 1908, ss 1-29

94. See section above on introduced tree planting

95. Roche, *History Forestry*, p 151

96. Thom, pp 111-112

97. Roche, *Forest Policy*, pp 57-66 (citing Report of New Zealand Timber Conference, AJHR, 1896, H-24, pp 1-54); Department of Lands: Report on State Afforestation in New Zealand, AJHR, 1911, C-1B, pp 1-74

Concern within the timber industry and Government continued to mount.<sup>98</sup> In 1909 the Government held a Commission of Enquiry into the Timber and Timber Building Industry. The terms of reference required Commissioners to investigate ways in which the industry could be improved and promoted. Consequently the Commission investigated costs and receipts at different levels of the industry, as well as timber importation, and remaining indigenous forest. Its report recommended more use of indigenous timber by the Government in public works, afforestation, and reservation of indigenous forests for future requirements and for watershed protection.<sup>99</sup> Aspects of Maori involvement were examined by the Commissioners which will be analysed in the next section of this chapter. In the next decade Government moved increasingly into forestry with a Royal Commission on Forestry in 1913, the separation of forests from the Lands Department in 1919 and the creation of the State Forest Service in 1921.

## 12.7 Maori and Forest

Throughout the period 1840-1912, Maori continued to be involved in the timber industry. Brief accounts of Maori involvement are found in the Forestry Reports of Campbell-Walker and Kirk and in the 1909 Commission Report, but there is substantial evidence in a 1903 Report of Parliament's Native Affairs Committee. This Committee was convened to investigate the 1903 Maori Land Laws Amendment Bill, in particular Clause 31 which proposed to invalidate all existing agreements for access to timber on Maori land and to have them reviewed by the Maori Land Councils.<sup>100</sup> While the subjects of these reports are different, they reveal the ways in which Maori engaged in the timber industry and the complexities of that engagement.

Maori were involved in the timber industry in a variety of ways. The most prevalent was the sale of cutting rights, through the lease of a specified area and often with royalties paid to the Maori forest owners for particular types and grades of timber. These were assessed either by the log or the sawn foot. Sometimes Maori were employed as cutters and in the sawmills. An example, also noted in Chapter Eleven on Scenery Preservation, is that of Ngati Wai and kauri on Little Barrier Island. Ngati Wai sold cutting rights in the 1870s, leasing the island for £100 per annum to a

98. Roche, *Forest Policy*, p 100 (citing Timber Industry Reports in AJHR: 1905 C-6, pp 1-42, 1907 C-4, pp 1-49, 1909 C-4, pp 1-118)

99. Roche, *Forest Policy*, p 101 (citing Report of Royal Commission on the Timber and Timber Building Industries, AJHR, 1909, H-24, pp 1-832; Roche, *Forest History*, pp 162-163)

100. Native Affairs Committee: Report on the Maori Land Laws Amendment Bill and the Maori Councils Bill, together with Minutes of Evidence, AJHR, 1903, I-3A, pp 1-47

European timber trader. That agreement fell through and in 1892 Rini Tenetahi signed a contract with another European, S Welton-Browne, for timber removal over five years. Although the exact amount is not given, it was described as 'substantial', with Tenetahi receiving £100 on signing and the right to transport the timber to Auckland on his own scow. After a Crown injunction to prevent removal of the timber, and after Welton-Browne left, Tenetahi directed the logging briefly with European and Maori workmen to whom he paid wages.<sup>101</sup>

Other examples of varying forms of contract come from the West Taupo podocarp forests. In 1902 George Gammon secured cutting rights for land at Raetihi for 21 years over 10,000 acres after the Maori owners had approached him. Payment included a lump sum of £800 on completion of the contract and royalties at one shilling and six pence per 100 superficial foot for totara, six pence for matai, three pence for rimu and two pence for kahikatea (white-pine). Roche states that 'the comparatively low royalties' were because the railhead was 50 miles away. A clause in the contract allowed for the employment of both Maori and Pakeha. Another form of contract was that with the sawmiller, J.W.Ellis, whose royalties to Maori owners were on the basis of Maori felling, cross-cutting and delivering the logs to the wagon or truck. Payments were two shillings and six pence per 100 feet for totara, one shilling and six pence for matai and rimu, and one shilling and four pence for kahikatea. Ellis paid a bonus of six pence for first-class heart of matai, the quality being decided by his company. But in this case, Maori did not provide the labour as they then contracted Ellis's company to do the work for one shilling per 100 feet. Seemingly Ellis had approached the Maori forest owners when he could not fulfil a contract for sleepers with the Wellington Land Board which would not allot him more forest land.<sup>102</sup> A third form of contract was explained to the Native Affairs Committee by Tudor Atkinson of the Taupo Totara Timber Company. Atkinson said his company paid £2 an acre for about 5,000 acres north of Taupo and employed Maori under the Auckland Sawmillers' Award.<sup>103</sup>

Apart from selling and labouring, Maori were involved in the timber industry in other ways. Ellis mentions a Maori-owned sawmill in the King Country.<sup>104</sup> The Ngati Tuwharetoa chief, Tureiti Te Heuheu Tukino, was a founding director of the Pungapunga Timber Company which was established in 1903 with cutting rights over 7,000 acres of Maori land near Mananui. However, the venture failed for lack of capital in 1909.<sup>105</sup>

101. Ralph Johnson, 'Report on the Crown Acquisition of Hauturu (Little Barrier Island)', Report Commissioned by the Waitangi Tribunal, February 1999, pp 7,26,29,37; Reed, pp 134, 226

102. Roche, *History Forestry*, p 120; 1903 Native Affairs Committee Report, pp 5-6, 13,17

103. 1903 Native Affairs Committee Report, pp 39-40

104. 1903 Native Affairs Committee Report, p 17

105. Roche, *History Forestry*, p 122

The beginnings of this company, although it is unnamed, were described at the 1903 Native Affairs Committee hearing by another director, Frank Thomas Moore. Moore was part-Maori and was introduced to Te Heuheu Tukino by cousins who knew the chief was keen to form a timber company. The company paid the chief to collect signatures from all the owners. The price for totara was two shillings and three pence per 100 feet; matai, ten pence; rimu, eight pence; and kahikatea, six pence. The contract specified that Maori should be given preference for employment in felling, delivering the timbers and at the mill. The contract also allowed them to hold one-third of the shares in the company which would be paid for from their royalties.<sup>106</sup>

Whether Maori received appropriate value for their trees is doubtful. Of the prices and conditions quoted above, those offered by the Pungapunga Company were clearly more advantageous for Maori than the others. Yet the Pungapunga collapsed within a few years because of undercapitalisation. Stone, without giving precise details, writes of the 'niggardly' prices and 'hard bargains' offered by the timber companies cutting in the kauri forests of Hauraki iwi. The prices were low, he explains, to accommodate costly, modern machinery, narrow profit margins and the burden of debt servicing. Their problem was overcapitalisation and heavy debt, sustainable only in expansionist times.<sup>107</sup> In both situations, Maori forest owners were squeezed.

According to evidence given to the 1903 Native Affairs Committee, not all Maori owners agreed with all aspects of the forest contracts. The negotiating process appeared to require Maori to see a map of the land, a Maori translation of the contract, and for a Justice of the Peace and a Maori translator to witness each owner's signature, but disagreements occurred.<sup>108</sup> Although Ellis stated that there were no disputes about the division of money when the land had been through the Land Court, Kirk, in his report, relates a differing incident. He had been told that a Maori, with ownership interests in the Puhipuhi kauri block between Whangarei and Kawakawa, had been dissatisfied with his share of the purchase money and had set fire to 150 acres. However, Kirk continued, the Crown Lands Department paid another Maori in the area, E. Erunehua, to supervise the forest. Kirk recommended that Erunehua's services should be retained.<sup>109</sup>

Evidence from the 1909 'Report of the Royal Commission on Timber and Timber Building Industries' indicates that Maori were sometimes

106. 1903 Native Affairs Committee Report, pp 30-37

107. Stone, pp 33-35

108. 1903 Native Affairs Committee Report, for example see pp 3, 7, 9, 18. From the Report it is impossible to say whether any particular statute required these actions. Thomas Shailer Weston, who explained them, agreed that they were required by the Native Land laws; p 3. Perhaps some timber companies carried them into timber sales' negotiations.

109. Kirk, p 17

paid at lower rates for larger areas than were paid for Crown land of smaller size. One case cited was an arrangement between Gammon and Maori owners in the Raetihi district. The exact date is not given; it is described as being 'a number of years ago'. The arrangement was for Gammon to pay royalties of six pence per hundred feet for 4,000 acres when other blocks were paying at least £5. The Maori owners wanted the old contract to continue after the land had become vested in the Aotea Native Land Board. (Again the date is not given.) This was agreed to by T.W.Fisher, Under-Secretary of Native Affairs and also President of the Aotea Maori Land Board. However, Harry Lundius, Crown Lands Ranger and also a member of the Land Board disagreed with this decision on the grounds of both price and acreage.<sup>110</sup>

Evidence from Heke's speech in the Parliamentary debate on the Maori Land Laws Amendment Bill corroborates that higher payments were made for forest on Crown land. The Government, he said, disposed of their timber standing on the estimate of an expert appointed by themselves: kauri logs at one shilling and seven pence per foot; two shillings per 100 feet for standing totara; and six pence for rimu. The Pakeha dealing with Maori, he continued, give them two pence for white-pine – sawn timber as against the log measurements; three pence for rimu and six pence for matai.<sup>111</sup>

Apart from the disparity in prices, several perspectives emerge. As a competitor, perhaps the Crown preferred that Maori not sell rights to larger areas at lower prices than it was prepared to offer since it restricted sawmillers to 800 acres to prevent the emergence of dominant firms.<sup>112</sup> But, seemingly, the Native Affairs Department did not want Maori to achieve high prices since Fisher was willing to let stand the low rates of the old contract between Gammon and Company and Raetihi Maori. Although Fisher was influenced by the possibility of court action by Gammon, re-negotiation of a higher contract price would appear to be obvious if the Aotea Native Land Board's duty was to 'safeguard the Natives', as Lundias stated. Fisher, perhaps, wanted to avoid anything that smacked of Maori 'landlordism'.<sup>113</sup>

Other seeming injustices also appear. Speculative sawmillers sold their cutting rights to blocks of Maori land to other companies, presumably both Pakeha companies making profits without Maori sharing in the extra profit. In situations where sawmillers were forced to compete for cutting rights from Maori owners, they sought to buy the land outright. As

110. Report of Royal Commission on the Timber and Timber Building Industries, AJHR, 1909, H-24, p 415

111. H Heke, 12 November 1903, NZPD, 1903, vol 127, p 531

112. See above section 'Felling Indigenous Forest'

113. King, p 284

Roche says, the bargaining position for sawmillers ebbed and flowed.<sup>114</sup> But they were in a better position to adjust to the contractions and expansions of the market than Maori. Since the latter had only the trees, and if they wanted or needed to sell, they were forced to accept whatever the timber companies were offering.

The 1903 Maori Land Laws Amendment Bill, especially Clause 31 (explained above), which the Native Affairs Committee was charged with investigating, can be seen as part of the 'tai hoa' policy of James Carroll, Minister of Native Affairs, to delay Maori land sales and encourage leasing.<sup>115</sup> The sawmillers who appeared before the Committee naturally argued against the principle of Clause 31 while agreeing to subject their contracts to Maori Land Council scrutiny should it be retained. One of their arguments was that forests were a crop or a chattel, like wheat or flax, which Maori were perfectly entitled to sell, and that forests should not be considered as 'land' in the sense of Native Lands.<sup>116</sup> Maori, who had signed these contracts, wanted them to proceed and also lobbied against Clause 31. 'Please strongly oppose the proposal of the Government in regard to the timber-bushes of the Maoris; we are satisfied with the arrangements' read one telegram signed 'Manawaiti, And all of us'.<sup>117</sup>

The Committee decided to strike out the clause, a decision which Carroll accepted because a satisfactory solution could not be reached in the limited time before the opening of the new Parliamentary session. Heke, though, argued for some legislative restrictions. He deplored sawmilling companies acquiring large areas of forest. He considered this to be detrimental to both bona fide small sawmillers and to Maori who received lower royalties than the Government. He also wanted restrictions applied so that forest on papatupu lands could not be sold, as some Maori were doing, until title was ascertained.<sup>118</sup>

Maori thus continued to be involved with the timber industry in diverse ways. Seemingly, though, it was only with the felling of indigenous forest although further research might reveal plantation forestry initiatives similar to Ngati Porou farming endeavours. Clearly Maori had differing opinions on Crown intervention in the timber market. One group wanted the independence to negotiate for themselves even if other Maori thought the price too low and the conditions unsatisfactory. There is a whiff of paternalism in Crown intervention but some Maori may have viewed that as the only way to achieve 'a level playing field' in the timber market. In general it can be seen that competition between Crown and

114. Roche, *History Forestry*, pp 120-121

115. King, p 285

116. For example, 1903 Native Affairs Committee Report, pp 2-3

117. 1903 Native Affairs Committee Report, p 47

118. Roche, *History Forestry*, p 121; Heke, 12 November 1903, NZPD, 1903 vol 127, p 531; 1903 Native Affairs Committee Report, p 2

Maori owners for cutting rights could have increased Maori gains if they had held off selling, especially since far more Maori than Crown land was available. But the whole situation, which involved multiple Maori ownership of land and therefore of forests, the methods employed by sawmillers to achieve the cheapest cutting rights, and the actions of the Crown, requires further investigation in the same way that the sale of Maori land has been rigorously analysed. In selling so much forest, it appears that Maori were less concerned to retain it for the spiritual and practical values it held, than for the cash it attracted. But that would be a simplistic assessment. Other pressures to sell, such as the nibbling at individuals by sawmillers and local body rates demands, need to be taken into account.

### 12.8 Kauri Gum

This section concerns the kauri gum industry. Beginning with a brief natural history of gum, it goes on to summarise the development of the industry, government involvement, and Maori participation with this forest product.

Kauri resin, or gum, is the solidified sap of the kauri tree. All parts of the tree are extremely resinous and gum exudes from any slight wound in the trunk, branches and leaves. The actions of wind and weather seem to cause the trees to bleed and, as the sap is glutinous, it adheres to the bark, solidifies and forms into lumps. Under their own weight and weathering, the lumps fall to the ground and are buried in humus and soil. Gum is found in areas of northern New Zealand's kauri forests.<sup>119</sup> It can be gathered in the cavity from where the branches radiate or bled from living trees by gashing their trunks and chipping off the 'bleed'<sup>120</sup>. Although discussion continued into the 1920s on whether judicious bleeding was injurious to the tree, it was made illegal on Crown lands in 1905.<sup>121</sup> But most gum was collected as fossilised chunks from the ground. It was exported, principally to London and New York, where it was melted to produce high-quality varnish.<sup>122</sup>

Gum can be found at different ground levels; on the surface or at varying distances below ground depending on the time when the forest died. It varies in clarity, hardness, purity, and colour, which ranges between black-brown to a transparent pale yellow. The latter is the most valuable

119. R W Firth, 'The Kauri Gum Industry. Some Economic Aspects', MA thesis, Auckland University College, 1922, pp 7-8; A H Reed, *The Gumdiggers. The Story of Kauri Gum*, Wellington, A.H. and A.W.Reed, 1972, Chap 4

120. Reed, pp 332-337

121. Reed, *Gumdiggers*, p 31

122. Report and Evidence of the Royal Commission on the Kauri-Gum Industry, AJHR, 1898, H-12, p 6

and the most scarce.<sup>123</sup> In the period covered by this report, it was collected by hand and dug out by spade, while deeper pieces were probed and hooked by gum-spears of between 3 and 25 feet in length.<sup>124</sup> It was gathered from swamps in the summer and from hills in the winter. Until the 1880s only pieces of good quality and too large to pass through a sieve of between three quarters of an inch and one inch mesh were collected. Smaller and lesser-quality lumps were disregarded until the gum became scarcer and overseas prices rose. Preparation for sale included removing encrusted dirt and scraping inferior gum off the surface if necessary.<sup>125</sup>

### 12.9 The Kauri Gum Industry

Gum was first exported about 1829 with further shipments to Britain and the United States in the 1830s. Not until the 1840s was its commercial value recognised and considerable quantities exported.<sup>126</sup> By 1856 an export trade was fully established. A table produced in the 'Report of the 1893 Kauri-Gum Industry Inquiry Commission' shows that, while quantity and value fluctuated to 1892 because of overseas commercial crises, over-production in New Zealand<sup>127</sup>, and international competition, the overall trends of both increased.<sup>128</sup> The industry was a private enterprise, without Government involvement until the 1890s. Although the date was not given, the Government imposed a licence-fee of five shillings for digging within State forests. From 1888, this was increased to ten shillings. This was to be collected by County Councils. But the fees were mostly overlooked because the difficulties and expense in collecting them outweighed the sums received. The amount collected to March 1893 was £83.10s.<sup>129</sup>

From the 1860s, as kauri gum was recognised as a commercial product and its price increased, Pakeha diggers were attracted. Individual diggers congregated in camps on the gumfields, digging for the buried resin once the surface gum had gone.<sup>130</sup> Until the 1890s, gum was dug by some as a sole occupation and by Pakeha settlers to supplement farming. Maori continued their involvement which will be discussed shortly. The spur to Government involvement in the 1890s, through the two commissions and subsequent legislation, appears to have been criticism of communal, intensive methods used by immigrants from Croatia (known as Austri-

123. Firth, p 10

124. Reed, *Gumdiggers*, Chap 6

125. Firth, pp 19-21, 48

126. Firth, p 14

127. 1898 Commission, p 6

128. Report of the Kauri-Gum Industry Inquiry Commission, AJHR, 1893, H-24, pp 12, 1-3

129. 1898 Commission, p 4; 1893 Commission, p 3; Firth, p 34

130. Firth, p 19

ans), and the need to derive some income from the gum trade for land restoration, improved road access and as a means of conserving the resource.

Large numbers of Croatians began to arrive in 1891. Two years later their numbers had grown so much that their co-operative, intensive methods, and long working days led diggers of British extraction to fear that the gum fields would soon be exhausted. The British diggers blamed the low payments of the day on the Croatians' excessive production and formed a Gum Diggers' Union to agitate for Government action.<sup>131</sup>

### 12.10 Government Involvement

The Government established a Commission of Inquiry in 1893 to investigate the industry in areas north of Auckland city. The Commission ascertained the area of gumfields as 724,000 acres of which 380,000 were Crown lands, 150,000 acres of Native lands which had not been through the Native Land Court, and 194,000 acres of private land owned by Maori and Pakeha.<sup>132</sup> It was estimated there was a total of 6,897 diggers in the gumfields north and south of Auckland city. The majority were in the north and comprised 3,453 British, 1,114 Maori, 353 settlers who dug gum, 514 'Austrians', and 345 other foreigners. They earned an estimated average of twenty-seven shillings a week.<sup>133</sup> The Commission surveyed the industry's history, overseas markets, buying procedures, and the overall benefits and costs to the New Zealand economy especially as a consequence of Croatian involvement. But their recommendations related more to Government finances than gumdiggers' grievances. The Commission recommended that all diggers, whether on Crown, Native or private land, pay an annual licence fee of five shillings. Its purpose was to fund various charitable-aid expenditures but also to restrict influxes of diggers to prevent premature exhaustion of the gum fields. The Commission also recommended an export duty of £3 per ton on all kauri gum shipped from New Zealand, the proceeds of which were to be used by the Government in road construction and maintenance in northern New Zealand.

One of the diggers' main complaints related to conditions imposed by owners and lessees of private land. Apart from the payment of licence-fees, gumdiggers could often sell their gum only to the landowner or les-

131. Firth, pp 21-22

132. 1893 Commission, p 1

133. 1893 Commission, p 8

see, who was often also the only storekeeper because areas were remote and there were no other buyers. Thus the digger could be taken advantage of by being paid too little for his gum, charged too much for his provisions, or paid in provisions rather than cash, a state popularly described as the 'truck system'. Maori, as will be shown shortly, found themselves in this position. However, the 1893 Commission found that complaints of this sort were less prevalent than they had expected and, indeed, they pointed out that the landowner or lessee had considerable costs to meet.<sup>134</sup>

The Commission also tended to dismiss the agitation that the large numbers of 'Austrians' were flooding the gum fields. The Commission considered the Austrians to be honest, industrious, sober and frugal, and suggested they should be induced to settle by offers of land to grow grapes, figs and olives. As settlers they would assist the country and the money they earned from digging would be retained to New Zealand's economic benefit.<sup>135</sup>

The Government did not act on the 1893 Commission's recommendations. As the Croatians continued to arrive, to strip the land bare and to remit their earnings home, kauri gum lobbyists persuaded the Government to establish a Royal Commission on the Kauri Gum Industry in 1898. The Commissioners canvassed much the same areas as their predecessors except that they gave more attention to the natural environment. While the 1893 Commission condemned the practice of diggers cutting through tree roots, the 1898 Commission described much greater environmental damage. Diggers laid waste to the gum fields by digging large holes which they left unfilled, burying the thin layer of topsoil, and burning off tea-tree and fern in fires that sometimes got out of control and burnt thousands of acres. This left the land vulnerable to wind erosion and placed settlers' homesteads in danger. Kirk, in his 1886 Report on Forests, had related how large quantities of timber were destroyed by gum diggers' fires. He added that, 'It is only fair to say that Maori diggers are far more careful with regard to fire than Europeans'.<sup>136</sup> The 1898 Commission recommended that worked out gum fields should be reconstituted into farms or forests through the initial sowing of suitable grass seed or gorse seed as grazing for stock.<sup>137</sup>

By 1898, the numbers of 'Austrians' had trebled to 1500. The Commission took the increase seriously and also diggers' complaints about the monopolistic practices of landowners, lessees and storekeepers. 'The

134. 1893 Commission, p 4

135. 1893 Commission, pp 6-7

136. Kirk, p 22

137. 1898 Commission, pp 5-6

greatest hardship is felt by the diggers should the storekeeper be also the holder of a publican's license. In such a case many of the diggers...find themselves...wasting their paper credit on intoxicants, and they go on from year to year little better than slaves, without homes and without money....[T]here should be insured to the digger the certainty that after winning the gum he could, on demand, obtain in cash its value, less the price of stores already supplied to him.<sup>138</sup>

The Commission recommended measures to address all these issues. Export duties should be levied, a licence of one shilling charged to diggers, land allotted for the settlement of both British and Austrian diggers, translations into the Dalmatian language of New Zealand's land laws and Savings-bank regulations, and restraints on monopolistic practices. It also recommended that Maori should not have to pay the licence fee, possibly because the Commission believed that Maori only dug when crops failed or provisions were exhausted.<sup>139</sup>

The result was the 1898 Kauri Gum Industry Act. This Act allowed the creation of kauri gum reserves on Crown lands, which were reserved to British and Maori diggers for an annual licence fee of five shillings. The Croatians could continue to work unreserved Crown and private land and had to pay a licence fee of £1 annually. Maori landowners did not require a licence to dig on their own lands. Monopoly usages over buying gum and selling stores were addressed by making the provisions of the 1891 Truck Act applicable to contracts between diggers and owners. Under the truck system payments were made in goods rather than in money. The Truck Act prohibited this.<sup>140</sup> Speakers in the debate on the Bill generally approved of its provisions as benefitting New Zealand as a whole. In the Legislative Council, William Walker of Canterbury considered that Maori, who, he said, used gum digging to support themselves when crops were not available, should be protected. No Maori MPs spoke.<sup>141</sup>

The Act was amended in 1899 to reinstate the intention of the 1898 to prevent 'aliens' from digging in the kauri gum reserves. Heke spoke of several matters that concerned Maori. One was the issue of Austrians digging in the reserves. Another was that some local bodies were levying Maori who sold gum which they were able to dig without a license fee on Maori land. He also argued that more public money should be expended to improve roads in the north, given the value of the gum extracted.<sup>142</sup> Other Amendment Acts were passed in 1902 and 1903. That of 1902 allowed for licences to be issued in the winter months for digging on State

138. 1898 Commission, p 10

139. 1898 Commission, p 4

140. WTD, Kauri Gum Industry Act, 1898, ss 2, 3, 4, 6, 8, 17; Firth, pp 23-24; Truck Act, 1891, ss 3-6

141. W Walker, 11 October 1898, NZPD, 1898, vol 104, p 630; House of Representatives debate, 28 October 1898, NZPD, 1898, vol 105, pp 547-560

142. WTD, Kauri Gum Industry Act Amendment Act, 1899, ss 2, 3; H Heke, 20 September 1899, NZPD, 1899, vol 109, pp 465-466

Forest lands and for kauri gum reserves to revert to ordinary Crown land when digging had ceased.<sup>143</sup> The 1903 Amendment allowed coal mining in kauri gum reserves subject to the protection of the kauri gum industry and prohibited aliens from digging gum in State forests.<sup>144</sup> There was little discussion of these Amendment Acts in Parliament and no Maori MPs spoke.<sup>145</sup> All these Amendment Acts were consolidated in the 1908 Kauri Gum Industry Act.<sup>146</sup>

The Government scrutinised the industry on occasion. In 1906 and 1911 it collected statistics on the number of licences and the amounts received for them.<sup>147</sup> In 1907 it received a report on the names, locations and sizes of kauri gum reserves which totalled approximately 222,832 acres.<sup>148</sup> In 1910 another report showed that approximately 2,159 acres of reserves had been withdrawn.<sup>149</sup> After questioning from the Kaipara MP, John Stallworthy, in 1908, the Trade Commissioner, M.Gow, produced a report on the industry the following year. Gow estimated the numbers of diggers who made their living from it at approximately 5,000 and that there were another 3,000-4,000 who were casual diggers. Although he mentions Maori, it is not clear whether they are included in the latter figure. Nor does he make other mention of them in his report. Gow was critical of two forms of collusion. The first, between Auckland merchants and local storekeepers who were usually the local buyers, kept gum prices down for the digger. The second, a kauri-gum 'ring' operated by London and United States brokers, allowed them to maintain high prices to the varnish-factories but retain the profits themselves. Gow recommended gum grading to standardise the industry, ways in which the Government might gain extra money from the industry, and the taxing of money sent out of the country by Austrians.<sup>150</sup>

## 12.11 Maori and the Kauri Gum Industry

For the first twenty years of the industry, between the mid 1840s and the mid 1860s, Maori were almost the only gum collectors but there is no evidence of Maori claims that they owned gum on other than their lands. Seemingly gumdigging was regarded by Pakeha as a Maori occupation. Firth quotes Ferdinand Hochstetter, the geologist who surveyed parts of New Zealand in 1859, that Maori were said to have earned not less than £16,000 in the preceding years. Firth gives a description of Maori collect-

143. WTD, Kauri Gum Industry Act Amendment Act, 1902, ss 2, 3

144. WTD, Kauri Gum Industry Act Amendment Act, 1903, ss 2, 4

145. 1902 and 1903 Amendment Bills, 27 September 1902, NZPD, vol 122, p 677; 16 November 1903, NZPD, vol 127, p 661

146. Kauri-Gum Industry Act, 1908, *Consolidated Statutes of the Dominion of New Zealand*, 1908, vol 3, p 212

147. Kauri-Gum Industry Act, Return of Licenses Issued Under the, AJHR, 1906, H-40; Kauri Gum Licenses. Number Issued, Fees Collected, and Amounts Paid to Local Authorities, 1st January to 31st August 1911, AJHR, 1911, H-34

148. Kauri-Gum Reserves, AJHR, 1907, C-12C

149. Kauri-Gum Industry Act. Particulars Relative to Lands Under the Operation of the, AJHR, 1910, C-13

150. M.Gow, 'Report on the Kauri-Gum Industry', AJHR, 1909, C-16; J Stallworthy, for example, 23 September 1908, NZPD, 1908, vol 145, p 388

ing and marketing methods. They collected as a hapu, brought their loads of gum in flax kits and piled them up before the buyer. Their chief and the buyer bargained over the price. Then each member filed past the buyer's clerk while the chief called out the amount due to him as his share of the purchase money which was paid on the spot in gold sovereigns.<sup>151</sup>

While Firth refers to 'him' and 'his', a description of Maori digging gum in a Parengarenga swamp, possibly from a later period, shows that women and children also participated. Some of the group stood in water-holes feeling for the gum while others dived for them. Others walked over the more solid ground probing with a spear. The old people and children sat on the swamp edges scraping the gum and sorting the various grades into sacks.<sup>152</sup> Firth notes that, in the period 1886-1906, Maori received two shillings above the ordinary price because they devoted more time and labour to scraping their gum and thus produced a better quality product.<sup>153</sup>

In his analysis of gum diggers, Firth suggests there were two groups of Maori diggers. A few were regular diggers but the majority used it to supplement their incomes, like Pakeha settlers, when crops failed or provisions were exhausted. There was always a considerable number of Maori working at any given time, representing 'a considerable proportion of labour on the gum fields.'<sup>154</sup>

While these accounts give a positive picture of Maori participation in the kauri gum industry, the view presented in the Waitangi Tribunal's Muriwhenua Land Report is much less favourable. The report describes a situation in which Maori were paid low prices for their gum and charged high prices for provisions by storekeeper-traders in the area. Even if there were two traders they worked together to ensure Maori could not trade competitively by refusing to buy gum from diggers who bought goods at the other's store. On occasion traders only gave credit at their stores and not cash for the gum collected. The advancing of credit led to Maori debt and sales of Maori land.<sup>155</sup>

The tenor of the Muriwhenua Report is supported by the comments on monopoly practices in the 1898 Commissioners' Report, as outlined above, although these refer to gumdiggers in general. It is also supported by the fact that Maori developed a system of cooperative stores to try to circumvent the monopolies of the Pakeha traders. The 1893 Commission referred to this initiative and expressed interest in the outcome but failed to provide details of its workings.<sup>156</sup> The 1898 Commission Report does

151. Firth, pp 15-16

152. Reed, p 65 quoting J T Bell, *The Wilds of Maoriland*, 1914, no page given

153. Firth, p 20

154. Firth, p 45

155. Waitangi Tribunal, *Muriwhenua Land Report*, Wellington, GP Publications, 1997, pp 355-367

156. 1893 Commission, p 4

not mention the scheme but the Muriwhenua Report says it failed because the main Pakeha trader had taken a lease on all Maori land in one area and there was no Maori land in the other.<sup>157</sup>

The question of Maori access to gum could be further examined. The 1893 Commission reported approximately one-fifth of the gumfields north of Auckland as Native land and that the 1898 Act allowed Maori to dig on this land without having to pay for a licence. That indicates Government recognition of the longstanding Maori involvement in the industry and of Maori need for work. It also allowed Maori control. But if Maori land had been leased to Pakeha traders or sold because of unscrupulous debt machinations, the concession would have been worthless.

In summary, Maori participated in the kauri gum industry from its beginnings, working more often than not as whanau or hapu rather than as individual gum diggers. Over the decades they may have made considerable amounts of money from their work but they appear to have been disadvantaged, like other diggers, from the monopolistic practices of gum traders. Whether they benefitted from the 1898 Kauri Gum Industry Act requires further investigation. While the concession on licence fees on Maori land and restraints on traders indicate benefits for Maori in theory, the benefits may have been compromised in practice as the Muriwhenua Report shows.

## 12.12 Flax

Flax, like trees, attracted early Crown interest.<sup>158</sup> After a brief natural history and survey of the flax industry in the early decades of the nineteenth century, this section examines Government actions to 1912.

New Zealand flax, in Linnean classification, is endemic to this country and Norfolk Island. The two varieties, currently recognised by science, are the tall *Phormium tenax* often found in wetlands and smaller *Phormium cookianum* which grows in alpine and coastal areas. New Zealand flax is related to the lily family. It is not the true flax, *Linum usitatissimum*, from which linen is produced, but was so-called by early European traders because of the similarity in fibres. Maori also recognised two distinct species, the tall harakeke and the small wharariki, but within those two classifications they propagated many varieties for muka (fibre) or colour.<sup>159</sup>

157. *Muriwhenua Report*, p 363

158. See Chap 2 above

159. Gerard Hindmarsh, 'Flax: the Enduring Fibre', *New Zealand Geographic*, vol 42, 1999, pp 29-33; Lucy B. Moore and Elizabeth Edgar, *Flora of New Zealand*, Wellington, Government Printer, 1976, vol 2, pp 51-52

Maori used flax in most everyday activities. They learned to scrape off the outer green material of the leaf by drawing it across the sharp edge of a mussel shell and so make available for use the silky threads of the inner fibre. These were then rolled and twisted to produce cords and threads of varying length, thickness and quality for differing uses.<sup>160</sup>

This skill in dressing flax was sought by the Crown and commercial traders in the early days of European contact. The fibres were exported principally for rope and cord. Maori were employed to handstrip flax in exchange for trinkets, blankets and guns. One gun cost one ton of dressed flax. The first major shipment, of 60 tons, was exported to London in 1818. This was valued at £2,600. Between 1828 and 1832, £50,000-worth of fibre was auctioned in Sydney alone. From 1827, Sydney and Hobart merchants placed agents all around New Zealand to trade with iwi for flax. The trade had a significant impact on Maori in several ways. Coastal iwi settled near swamps to more easily gather the flax, which led to poor health. But this era of the flax trade peaked in 1831, when one ton of flax fetched between £18 and £25 on the London market. It then fluctuated throughout the 1830s and diminished until the 1860s.<sup>161</sup>

The flax trade picked up again in the 1860s with demand for rope created by the American civil war. But by then the nature of the industry in New Zealand had changed. Iwi were no longer prepared to bear the previous heavy labour costs of gathering and hand-dressing flax, nor were they able to prepare the large quantities wanted for the market. Flax mills were established and a machine invented to strip out the inner fibre. While Maori may have worked as individuals in the flax mills, they appear not to have participated as whanau or hapu in the industry. They continued to exert some influence, though, through demands for good prices for swamplands and burning the flax if the price was insufficient, as occurred to William Meikle at Whitianga.<sup>162</sup> They also exercised an indirect influence, in that successive Government enquiries into the industry called for machines to be perfected which would dress flax to the same high standards that Maori had achieved by hand.

By 1906 there were 240 flax mills throughout New Zealand employing 4,000 'flaxies'. Most mills were sited near swamps, like the largest mill, Miranui, built in 1907 near the Makerua Swamp along the Manawatu River between Shannon and Linton. The flax was cut by hand and tied into bundles for transportation to the mill by wagons, carts known as konaki, or by tramway in the case of Miranui. The leaf was held between

160. Hindmarsh, pp 32-35

161. Hindmarsh, p 40; J M R Owens, 'New Zealand Before Annexation', *The Oxford History of New Zealand*, W H Oliver (ed) with B R Williams, Wellington, Oxford University Press, 1981, p 34

162. Janet Riddle, *Salt Spray & Sawdust: One Thousand Years of History in Mercury Bay, Te Whanganui-a-Hei*, Whitianga, Gumtown Publishers, 1996, p 153

horizontal feed-rollers and rolled, while another drum, with iron beaters attached, stripped off the green outer layer. The fibre was then washed and laid out for drying and bleaching in the sun. Once dry, it was scutched in another revolving drum with wooden beaters to clean and polish it.<sup>163</sup>



Cutting flax on the Makurerua Swamp near Shannon, 1917. Photographer G L Adkin. From the Adkin collection, photograph courtesy of the Alexander Turnbull Library (1/2-065683)

### 12.13 Government Involvement

Successive Governments recognised the economic benefits of a sustainable flax industry to New Zealand. Because international prices and conditions for flax's competitors, sisal and a fibre known as manilla from the Phillipines, were unstable, Governments sought to streamline the New Zealand end of the market. This revolved around searches for flax varieties that would produce a high-quality fibre, machines and preparation techniques that would furnish large quantities of the same high-grade product as Maori hand-dressing and, by the early twentieth century, grading to produce a consistent fibre, and conservation of the plants

163. Hindmarsh, pp 41-44; Riddle, p 153; Malcolm McKinnon (ed), *New Zealand Historical Atlas Ko Papatuanuku e Takoto Nei*, Auckland, David Bateman with Historical Branch, Department of Internal Affairs, 1997, p 64a

themselves in wetlands. Also on the wish-list was a desire to expand the range of the fibre to produce a thread suitable for textiles. To these ends official investigations and recommendations were made throughout the remaining decades of this review.

‘The utilization of New Zealand flax has been stimulated in every conceivable way – by the self-interests of Colonists and Colonial Governments’. So wrote Lauder Lindsay in a review which formed part of the 1870 Report of the Flax Commissioners on the Means Employed in the Preparation of New Zealand Flax. These included offers of financial incentives for marketable fibres: £4,000 from the General Assembly in 1856, £1,000 from the Canterbury Provincial Council, and £500 from the Otago Provincial Council.<sup>164</sup> Financial incentives were suggested again in 1890 when Parliament’s Flax and Other Industries Committee recommended a bonus of £10,000 for processes of flax dressing which would reduce the cost of production, improve fibre quality to make it suitable for textiles, and to utilise waste products.<sup>165</sup>

Government encouragement also included displays of items made of flax fibre in New Zealand and overseas. In 1871 the Colonial Museum exhibited articles of both hand and machine dressing by Maori and Pakeha. Those not required by their owners were sent for display to other New Zealand museums and to public museums in Melbourne, San Francisco and New York. Items were also sent to overseas manufacturers and to Kew Gardens, to attract attention to the merits of the fibre.<sup>166</sup>

Scientific research was done on varieties of the flax plant and fibres. New Zealand scientists, James Hector and William Skey, carried out investigations on the fibre. Amateur scientists conducted trials. The 1870 Commissioners recommended the use of Maori knowledge in procuring the best varieties.<sup>167</sup> Reports were also requested from overseas scientists: the Professors of Botany and Chemistry at Edinburgh and Oxford and from J.D.Hooker at Kew.<sup>168</sup>

New Zealand’s official Agents-General in London visited British manufacturers to make inquiries about the merits of flax<sup>169</sup>, forwarded to New Zealand items made of the fibre in Britain<sup>170</sup>, and made inquiries about the cultivation of the linen flax plant in Europe and about price rises.<sup>171</sup>

By 1906 the 4,000 workers at the 240 flax mills produced fibre for export that contributed over £500,000 a year to New Zealand’s finances.<sup>172</sup> The industry was seen, by then, to have costs as well as benefits and these

164. Lauder Lindsay, ‘On the Obstacles to the Utilization of New Zealand Flax’, Appendix 4 of Report of the Flax Commissioners on the Means Employed in the Preparation of New Zealand Flax’, AJHR, 1870, D-14, p23

165. ‘Report of the Flax and Other Industries Committee on the Flax Industry, together with Minutes of Evidence and Appendix’, AJHR, 1890, I-6, p 1

166. Dr Hector, ‘General Report on the Flax Industry’ in ‘Further Papers Relative to the Preparation of the Phormium Fibre’, AJHR, 1872, G-17, p 1

167. ‘Report of the Flax Commissioners on the Means Employed in the Preparation of New Zealand Flax’, AJHR, 1870, D-14

168. ‘Further Papers on the Report of the Commissioners...’, AJHR, 1871, G-4a

169. ‘Report from the New Zealand Commissioners Relative to the Manufacture of New Zealand Flax’, AJHR, 1870, D-14a

170. ‘Phormium Manufacture. Letter from the Agent-General, Forwarding Specimens of Towelling Manufactured in England from New Zealand Phormium’, AJHR, 1872, G-44

171. ‘Papers Relative to the Cultivation of Flax’, AJHR, 1879, session 2, H-5; ‘New Zealand Hemp (Phormium Tenax) Information Respecting the Recent Advance in Price, etc’, AJHR, 1889, H-17 and ‘New Zealand Hemp (Phormium Tenax) Further Information Respecting Advance in Price etc’, AJHR, 1889, H-48

172. Hindmarsh, p 41

were addressed in various ways by the Government. In line with contemporary moves to conserve indigenous flora, the 1890 Parliamentary Flax and Other Industries Committee recommended that care should be taken, when flax leaves were cut, to leave the heart of the flax-fans uninjured. It was often cut in a reckless and destructive manner so that plants took several years longer to regrow than if care was taken. The same Committee recommended the classification of flax fibres at the port of export. Like the recommendations for the grading of kauri gum, classification was recommended so that the combination of high and poor quality fibres did not lower prices in London.<sup>173</sup> Income and costs to the Government associated with grading were published in 1904 and showed that the grading process made a reasonable profit.<sup>174</sup> In 1905 the Timber and Flax Royalties Act was passed. This allowed for half the royalty received under any licence for cutting timber or flax and payable to the Consolidated Fund, to be paid to the relevant local body.<sup>175</sup> In the House of Representatives, Thomas Duncan, the Bill's mover in the Second Reading, explained that this was to compensate local bodies for road repair since both industries interfered with the roads.<sup>176</sup> In 1907 the amounts paid to local bodies were published but the figures did not differentiate between timber and flax.<sup>177</sup>

In summary, then, the flax industry began as a Maori venture. Maori knowledge of the best varieties and Maori skill in the production of a high-quality fibre were acknowledged by those in Government who wanted to advance the industry. But commercial demands for quantity meant machine rather than hand-dressing was necessary. This, in turn, meant that production remained for rope and cord rather than becoming geared to textiles. Despite financial incentives and verbal encouragement, machines were not devised to produce a finer, high-quality fibre. Nevertheless the industry supported the employment of thousands and contributed substantially to the New Zealand economy.

## 12.14 Conclusion

This chapter has examined several aspects of forestry; felling and reservation of indigenous forest and afforestation with introduced tree species. It has also looked briefly at kauri gum as a forest product and at flax as a material central to Maori life. All three have been seen in the context

173. 1890 Report, pp i-ii

174. Flax-Grading. Income and Expenditure with, AJHR, 1904, H-14

175. The Timber and Flax Royalties Act, 1905, s 2

176. T Duncan, 29 September 1905, NZPD, 1905, vol 135, p 344

177. Timber and Flax Royalties Act. Amounts Paid to Local Bodies Under, AJHR, 1907, C-17

of industry although, by 1912 indigenous forest was also desired for aesthetic, ecological and tourism reasons.

For most of the period, 1840 to 1912, Crown policy on forestry was largely concerned with the felling of indigenous forest, partly as an antecedent to European settlement. In the early 1840s a licensing system was established whereby a sawmiller paid an annual fee of £5 to fell, remove and sell timber on Crown land. Regional modifications were introduced to the system when Crown Waste Lands came under Provincial Government control. In the later part of the nineteenth century, when concern mounted at the disappearance of indigenous forest, various measures to conserve it were adopted, including a change to a royalty system for sawn output in 1885.

Conservationist measures (here meaning for future use) also saw the beginnings of another form of forestry, that of reservation of indigenous forests. The provinces of Canterbury and Otago, because they were relatively treeless, had early on adopted conservation measures and set aside reserves of forest for future use. In 1874 Parliament passed the New Zealand Forests Act. This instituted a ministry of State Forests and provided for the acquisition, reservation and scientific management of indigenous forests. This policy only lasted two years, as did a similar design under the 1885 State Forests Act. Apart from reservation for future use, conservationists also wanted indigenous forest reserved for climatic reasons as it was then thought that forests attracted rain clouds, and to prevent soil erosion especially on steep slopes.

Reservation of indigenous forest was not considered practical for several reasons. Pakeha believed the trees to be too slow-growing, difficult to propagate, and doomed to extinction. Therefore afforestation by individuals and local bodies with introduced trees was promoted under several Forest Trees Planting Encouragement Acts in the 1870s. In 1897 a forestry branch, established in the Lands and Survey Department, began to plant exotic species more intensively in treeless areas or where there was little indigenous forest.

Maori were involved in the timber trade virtually from the time of European arrival in New Zealand. Prior to 1840 they were needed by Europeans for their knowledge of stands and characteristics of trees like kauri and kahikatea; and for their labour in felling, moving the logs and loading them into ships. Maori became skilled in driving kauri through

flooded streams to the coast. But in the 1870s and 1880s, when the method was intensified through the use of dams and booms for much larger commercial operations, Maori protested about the damage such constructions caused to their land, and to their river and coastal fisheries.

Maori continued to be involved in the timber industry in several ways; through the sale of cutting rights, as cutters and in the sawmills. In 1903 Te Heuheu Tukino helped form the Pungapunga Timber Company which offered more advantageous terms for cutting rights to forest on Maori land than did other commercial companies. It collapsed from undercapitalisation. Clearly, Maori wanted or needed to sell forest on their lands but appear to have received lower prices than the Crown gained. Some Maori wanted the independence to negotiate for themselves. Others thought prices too low and conditions unsatisfactory and wanted some Government intervention. Maori forests would benefit from the same research and analysis that has been applied to Maori land.

Kauri gum was first exported about 1829 and was a private enterprise industry until the market expanded in the 1890s when the Government became involved. This was partly due to criticism of the communal, intensive methods of considerable numbers of Croatians, and the Government's need to derive some income for land restoration, improved road access, and for conserving the gum. This led to the 1898 Kauri Gum Industry Act and a number of Amending Acts in the early twentieth century.

For the first twenty years of the kauri gum industry, Maori were almost the only collectors. Over the decades they may have made considerable amounts of money but they appear to have been disadvantaged, like other diggers, from the monopolistic practices of gum traders. The 1898 Kauri Gum Industry Act recognised the value of the work to Maori and gave them a concession on licence fees. The Act also attempted to curb monopolistic trading but further research on this is necessary to determine its benefit to Maori.

Maori skill in dressing flax by hand was required in the very early days of Maori-European contact and continued to be in demand until flax mills were established and machines invented to strip out the inner fibre in the late 1860s. Even then Maori hand-dressing was admired because machines could not produce as fine a product. The fibres were exported principally for rope and cord. The industry was a private enterprise but

the Government, anxious to develop it, offered incentives, encouragement, scientific investigations and marketing proposals. While flax fibre production had been important to Maori as an industry in the early part of the nineteenth century, kauri gum digging and particularly forestry were more significant industries for Maori in the later decades.