

The impact of the white settlers on the  
natural environment of Natal, 1845-1870.

by

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(i)

## ABSTRACT

As no other study of settler impact on the Natal environment exists for the early colonial period, this thesis is a pioneering work. It aims to document the changes white settlers made to the natural environment of Natal between 1845 and 1870. In order to do that, an understanding of the state of the environment by 1845 first had to be reached. This involved outlining briefly the nature of the environment and then assessing the impact made by the Iron Age farmers, the white hunter-traders, and the Boers of the Republic.

The establishment of the Colony in 1845 meant that Natal was now in the hands of British administrators, determined to discover and utilize the resources of this outpost of the British Empire. The arrival and distribution of about 5 000 settlers in the early 1850s made the white population of Natal predominantly urban and British. Imbued with the idea of progress these settlers attempted to produce for their own subsistence and, where possible, sufficient surplus to sell for profit on the market. In so doing they not only perpetuated and intensified types of environmental exploitation already operating in Natal, but also initiated new ones.

Over a period of twenty-five years, the comparatively small settler population was responsible for the irreversible transformation of the landform and mineral resources, flora and fauna of Natal. This thesis details the changes the settlers caused, on a region-by-region basis, but lack of evidence in some areas - despite extensive research - has resulted in several lacunae in the overall picture. However, as the conclusion shows, the general pattern of exploitation of the Natal settlers was not unique, but in fact mirrored that of settler societies in Australia and North America.

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ABBREVIATIONS

AGO	Attorney General's Office
CSO	Colonial Secretary's Office
DAR	Durban Archives Repository
GH	Government House
NAD	Natal Archives Depot
NPP	Natal Parliamentary Papers
PC	Pietermaritzburg Corporation
SGO	Surveyor General's Office
SNA	Secretary for Native Affairs

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I should like to state that this thesis is entirely my own work, except where indicated in the text and footnotes, and has not been submitted to any other university.

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PREFACE

Among historians world-wide, there is an interest in environmental history as a sub-discipline that has been growing steadily since the 1970s.<sup>1</sup> Although precise definitions of the sub-discipline may vary from one environmental historian to another, the central concern is always the same: the interaction of humans and the environment.<sup>2</sup> As Carruthers points out, this concern has been reflected in the past by several prominent historians of southern Africa too, but it is now the explicit focus of an increasing number of environmental historians.<sup>3</sup>

Regarding south-east Africa, the pioneering works that include ecological considerations have been largely speculative ones, and are confined to Zululand and south-east Africa in the pre-colonial period.<sup>4</sup> No similar study exists for the nineteenth century in the area bounded by the Drakensberg Mountains in the west, the Indian Ocean in the east, the Thukela River in the north and the Mthamvuna River in the south.<sup>5</sup>

This thesis aims to contribute to the understanding of the environment of the area outlined above, referred to as Natal from here onwards, by documenting the changes

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<sup>1</sup> D. Worster (ed.), The Ends of the Earth: Perspectives on Modern Environmental History (Cambridge, 1988), Appendix: Doing Environmental History, p. 290.

<sup>2</sup> *Ibid.*, p. 292.

<sup>3</sup> J. Carruthers, 'Towards an environmental history of southern Africa: some perspectives', South African Historical Journal 23 (1990), pp. 184-95.

<sup>4</sup> M. Hall, 'The ecology of the Iron Age' (unpublished Ph.D. thesis, University of Cambridge, 1980); D.W. Hedges, 'Trade and politics in southern Mozambique and Zululand in the eighteenth and early nineteenth centuries' (unpublished Ph.D. thesis, University of London, 1978); J.J. Guy, 'Ecological factors in the rise of Shaka and the Zulu kingdom', in S. Marks and A. Atmore (eds.), Economy and Society in Pre-Industrial South Africa, (Longman, 1980), pp. 102-19.

<sup>5</sup> I am aware of the work of D. Gautier, 'Prudence and Profligacy: The dialectic of ecology and humanity in the Underberg district in historical context' (unpublished Honours thesis, University of Natal, 1994) which is concerned with only a small part of Natal.

caused by the white settlers between 1845 and 1870. The study focuses on white settlers but includes their interaction with the indigenous population and the Indian immigrants. While the emphasis will lie on the activities of the whites in terms of the environment, it is necessary to define briefly the concept of the natural environment itself, which refers to all the abiotic components of the resource base (the soil, water, rocks and minerals), as well as the biotic components (the plants and animals).

The organisation of this thesis is based on the three issues that Worster suggests environmental historians should consider: the reconstruction of the past landscape; the human modes of production or the material culture; and the group's mental culture in relation to the dialogue with nature.<sup>6</sup> The establishment of the environmental baseline from which to work is a problem faced by all environmental historians, for the environment is not a static backdrop but is constantly being modified by human agency. The description of the Natal environment given in this thesis is brief by intention since the thrust of the study is on the human impact. In order to understand the state of the environment by 1845, the impact of the Iron Age farmers, the hunter-traders and the Boers prior to this date must be assessed. Thereafter, the white settlers' material culture and their mental culture in relation to the environment are discussed, and the empirical evidence given of their interaction with it between 1845 and 1870.

The period under consideration is the early phase of colonial rule. It stretches from the establishment of effective British control in 1845 until the opening up of several diamond mines in the Kimberley district in 1870. The diamond discoveries stimulated a period of rapid growth in parts of the sub-continent and so began a new era in southern Africa. In Natal, after twenty-five years of slow development, the rate of economic advance suddenly accelerated and the attitude of the white settlers towards the environment changed. In order to progress in agriculture, stockfarming, mining, trade, and industry, the colonists began to exploit natural resources far more intensively than they had done previously. Because of this development, 1870 can be seen as a turning point in the

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<sup>6</sup> Worster, *The Ends of the Earth*, pp. 289-307.

environmental history of Natal.

In the early years of colonial rule no official restraints limited the settlers' exploitation of natural resources. The constraints they suffered were those of labour shortages, insufficient finance, and the lack of suitable technology. Gradually, however, administrative bodies were forced to realise that the uncontrolled use of resources had led to a change in the environment. This first became evident in the diminished size of the forests and in the decrease of the population of certain animal species. The authorities therefore attempted to slow down the rate of environmental transformation through introducing restrictive measures. By 1870 several of these were in operation.

The thesis consists of seven chapters. The first one is introductory: it outlines the nature of the environment and the kind of forces that operated on it before Natal became a British colony.<sup>7</sup> Chapter 2 discusses the main forces for change under British colonial rule. The next four chapters deal with different regions of Natal: Chapter 3 is on Durban; Chapter 4 concerns the coastlands; Chapter 5, the midlands; and Chapter 6, the far north. Chapter 7 is the conclusion, where the settler impact is summed up and the Natal experience is compared briefly with colonial contexts in Australia and North America.

From the above it is clear that a regional approach is adopted. There are two reasons for this. First, as a consideration of primary vegetation is a vital part of this study, it seems convenient to adopt the approximate topographical divisions used by the botanist, Moll, in his study of the vegetation of part of Natal.<sup>8</sup> The inclusion of the whole of the Alfred County in Chapter 4 is an exception to this system as the county stretches across both coastal and inland regions. Secondly, the regions chosen also approximate to the areas of the magisterial districts. This fact facilitates the use of magisterial records as

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<sup>7</sup> The word 'forces' here is being used in a very wide sense to include natural forces, human agency and historical circumstance.

<sup>8</sup> E.J. Moll, The Vegetation of the Three Rivers Region, Natal, (Pietermaritzburg, Natal Town and Regional Planning Reports, 1976), vol. 33, p. 16.



source material.

Each of the chapters in the main body of the thesis consists of four parts. The first section traces the history of the region and discusses the particular forces operating on the environment, while the next three outline the changes made by human activity on the landform, flora and fauna respectively. While this makes for a degree of repetition in the thesis, it facilitates the handling of the evidence.

The sources consulted are mainly the documents of the whites, so they reflect the attitude of the whites. They are very uneven in coverage, as there are more records available for the areas of heaviest white settlement. This inequality of coverage is reflected in the chapter lengths. As awareness of the environment per se is a modern concept, there is no office of origin, such as a Department of Forestry, to provide key documents for this study. Instead, information, however sketchy, has had to be drawn from a wide variety of sources.

## CHAPTER 1

### THE STATE OF THE ENVIRONMENT BY 1845

#### **1. The natural environment of Natal**

The area of south-east Africa known in 1845 as Natal was bounded by the Drakensberg Mountains in the west, the Indian Ocean in the east, the Thukela River in the north, and the Mthamvuna River in the south. While what follows is a brief description of this area in modern times, the various features commented upon below would have pertained to Natal in 1845.

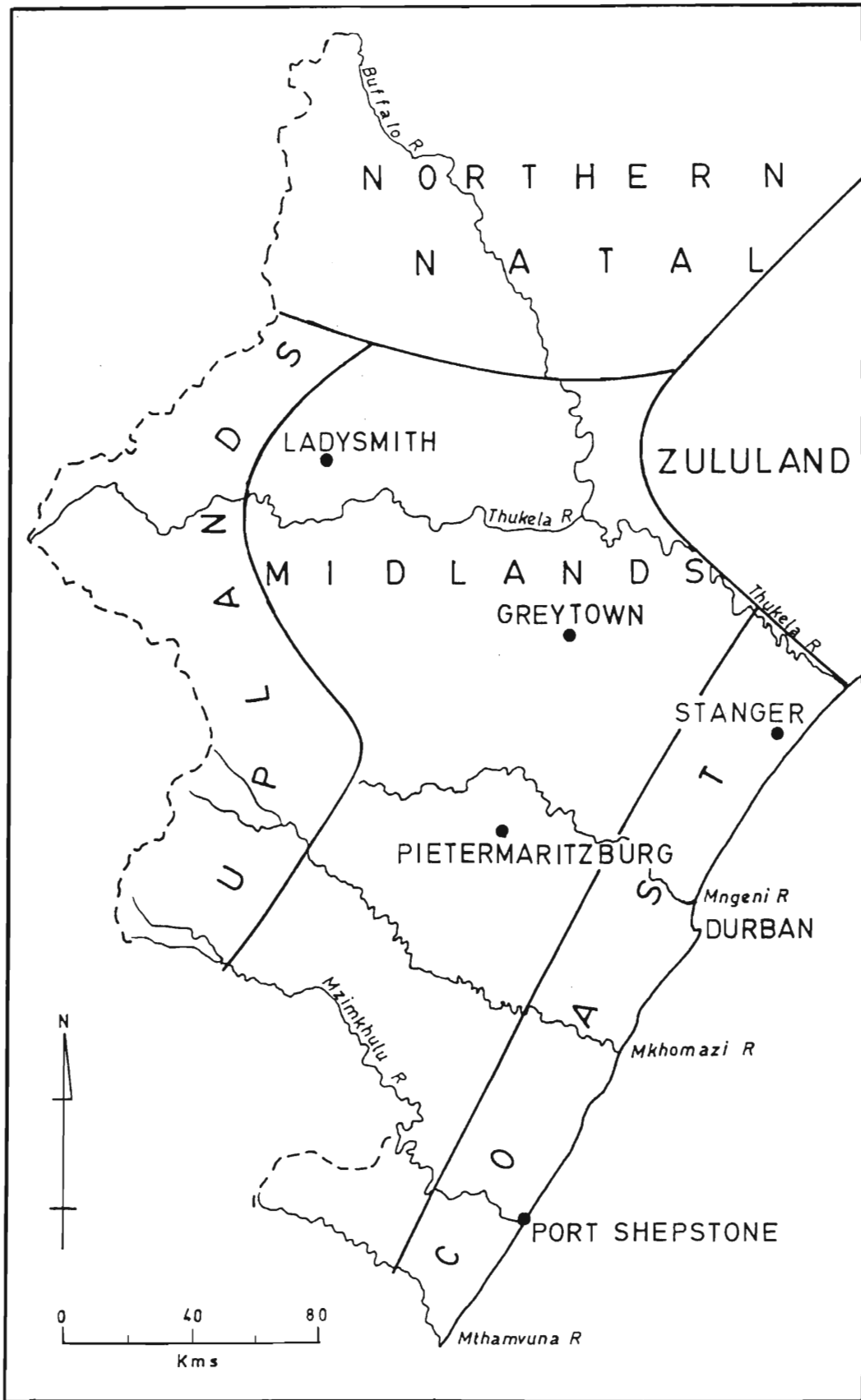
In a matter of about 200 kilometres (124 miles) the land slopes in a stepped topography from the heights of the Drakensberg, at about 3 000 metres (9 842 feet), to the upland area, then flattens out into the broad basins and rolling country of the midlands, then slopes down to the coast. This slope determines the orientation of the drainage pattern, which runs from west to east. The major rivers dissect the surface so that deep gorges and high spurs radiate eastward from the mountains.<sup>1</sup> These main rivers from north to south are: the Thukela, Mvoti, Thongati, Mngeni, Mkhomazi, Mzimkhulu, and Mthamvuna. There are few inlets along the coast suitable for use as harbours other than the bay of Durban. These geographical regions and the position of some of the rivers are visible on Map 1.

Although it is not necessary to discuss geological details here, the fact that certain metals and minerals occur in Natal is relevant to this study. Vast coal beds exist in Northern Natal, there are a few scattered coal deposits in the midlands, and an outcrop occurs on the north coast. Small deposits of iron ore, copper, zinc, lead, silver and gold occur in clusters, associated with deep valleys.<sup>2</sup>

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<sup>1</sup> Natal Regional Survey, vol. 1 (Cape Town, 1951), p. 30.

<sup>2</sup> *Ibid.*, Chart IX, opp. p. 140.



Map 1: Map of Natal showing major geographical regions and rivers

Natal shows considerable variety in its climate and vegetational detail. The bulk of the rain falls in the summer months, with the highest rainfall occurring at the coastland the driest area being the north-western part. However, this pattern is not fixed, for as well as local variation in rainfall, there can be erratic, seasonal distribution. In Natal, one archaeologist has suggested that a cyclical pattern of above-average rainfall followed by a period of below-average rainfall has been characteristic from at least as far back as the mid-fourteenth century.<sup>3</sup>

Fire is a natural factor in the Natal environment as lightning strikes occur during spring thunderstorms. They can strike anywhere from the coast to the highland areas.<sup>4</sup> Moll has argued that the grasslands above 1 070 metres (3 510 feet) are fire maintained, so it is unlikely that this high land was covered with forest, as Acocks suggested was the case before any Iron Age settlement occurred.<sup>5</sup>

It is possible to divide Natal, very broadly, into two main geographical zones: the coastal area and the interior. Both of these zones can then be subdivided on the basis of vegetation patterns. The coastal strip consists of a narrow coastal belt where coastal forest is found; while the coastal hinterland with its savannah-like vegetation on the tableland, has woody communities in the river valleys. The interior, consisting of the midlands, the uplands and Northern Natal, is mostly grassland. When considering vegetation, however, one must bear in mind that there is little or no vegetation in South Africa that is in its original condition. One cannot, therefore, be sure of the exact changes that hundreds of years of human treatment caused to the vegetation.<sup>6</sup>

The salient points that emerge from the above description need to be considered in

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<sup>3</sup> M. Hall, 'Dendroclimatology, rainfall and human adaptation in the later Iron Age of Natal and Zululand', Annals of the Natal Museum 22 (1976), figs. 3 A-D.

<sup>4</sup> E.J. Moll, Three Rivers Region, p. 32.

<sup>5</sup> *Ibid.*, p. 32.

<sup>6</sup> M. Hall, The Changing Past: Farmers, Kings and Traders in Southern Africa, 200-1860, (Cape Town and Johannesburg, 1987), p. 33.

relation to the white settler society of 1845-1870. Contact with the interior of southern Africa was barred partially by the heights of the Drakensberg. The stepped topography prevented rivers from being navigable, while the lack of natural harbours forced maritime communication to be channelled mainly through Durban. The dissected tableland and deep river valleys inhibited human movement in a north-south direction but promoted movement in a west-east direction, especially where river valleys broadened, on the higher land, as with the tributaries of the Thukela. The potential for mining was limited by the fact that of the deposits of minerals and precious metals, only coal occurred in any quantity.

In Natal, there is great inequality of soil fertility<sup>7</sup> which limits the areas available for cultivation. However, the presence of some areas of fertile soil and the extensive grasslands made the land attractive to agriculturalists and stock-keepers, Iron Age farmers and white settlers alike. The composition of the veld was such that there was grazing all year, provided one had access to grazing, for the 'sour' veld could be grazed in summer, while the 'sweet' veld provided grazing throughout the year although it was susceptible to over-grazing. Stock-keepers had consequently to practise veld management if stock were to be adequately fed. A further factor in the stock-keepers' favour was the apparent absence of tsetse (*Glossina* spp.) in Natal. While pockets of tsetse occurred north of the Thukela,<sup>8</sup> there are no historical records to show that it was ever present in Natal.

A more detailed description of the ecology of the coast and the interior will now be given.<sup>9</sup> The coastal strip is a narrow belt about 16 kilometres (9,9 miles) wide. It has evergreen sub-tropical vegetation and although most of the rain falls during the summer, there is no really dry month of the year. The summers are hot but the winters are cooler and mild, without frost. The soil is poor, for although it is deep, it is also leached and

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<sup>7</sup> Natal Regional Survey, pp. 80-4.

<sup>8</sup> J.J. Guy, The Destruction of the Zulu Kingdom, (London, 1979), p. 7.

<sup>9</sup> Moll, Three Rivers Region, pp. 40, 44-8 for most of the information in this and the next three paragraphs.

sandy. The primary vegetation, before the period of agricultural settlement would, according to Moll, have been as follows. In the saline estuaries there would have been three mangrove species in the swamps: the white mangrove (Avicennia marina); the black mangrove (Bruguiera gymnorhiza); and the red mangrove (Rhizophora mucronata). Within the salt-spray zone of the shore there would have been the dune forest, stabilizing the dunes and growing to a height of about 4 to 12 metres (13 to 38 feet), with the characteristic canopy tree being the coast red milkwood (Mimusops caffra).

Behind the dune forest there would have been the coast forest, with the canopy trees reaching heights between 10 and 21 metres (32 and 68 feet). The forest would have included the following trees: Natal mahogany (Trichilia dregeana); white stinkwood (Celtis africana); white pear (Apodytes dimidiata); essenwood (Ekebergia capensis); white ironwood (Vepris lanceolata); Kaffir ironwood (Millettia grandis); bastard black ironwood (Chionanthus peglerae); black ironwood (Olea capensis); falcate yellowwood (Podocarpus falcatus); upright yellowwood (Podocarpus latifolius); and white milkwood (Sideroxylon inerme). The sub-canopy layer, reaching a height of between 9 and 15 metres (29 and 49 feet), would have included the Natal sweet plum (Engelerophytum natalense) and the bastard ironwood (Drypetes arguta). The shrub and herbaceous layer of the coastal forest would have been poorly developed.

In the low-lying swampy areas, such as around Durban bay and all the river mouths, there would have been dense reed beds (Phragmites australis and/or Typha capensis, as well as other associated species of Cyperaceae). If flood water had entered such places, the reeds would have caused silt deposition.

Where the soil was clayey, causing poor drainage, the vegetation would have been palm veld, consisting of grassland interspersed with clumps of palms. The characteristic palm would have been the reclining palm (Phoenix reclinata). Other trees that would have invaded and formed clumps with the reclining palm were the Natal fig (Ficus natalensis) and the wild banana (Strelitzia nicolai). Where the site was dry, some of the invading plants would have been the scented thorn (Acacia nilotica), the splendid acacia (Acacia

robusta) and the thunder tree (Trichilia emetica). Beneath the trees there would have been a variety of herbaceous plants. It is possible that the grassland would have been dominated by Themeda triandra.

Behind the coastal belt is the highly dissected coastal hinterland, a belt about 30 kilometres (18 miles) wide.<sup>10</sup> Here the river valleys have cut deeply into the tableland so that the remaining tableland forms spurs. The altitude of the highest of these flat-topped ridges is about 900 metres (2 952 feet). The tableland soil is moderately deep, fairly sandy and leached. The climate is warm and moist in summer, cool and dry in winter. Light frost can occur on the ridges. According to Moll, the primary vegetation of the tableland would have consisted mostly of wooded grassland, consisting of paper-bark acacia (Acacia sieberana) with a grassland understorey of Themeda triandra, as well as patches of pure Themeda triandra grassland.

In the river valleys the soil is shallow and moderately leached, but on the valley bottoms there is deep alluvial soil. The valleys are hot and moist in summer, cool and dry in winter. The primary vegetation would have been a mixed woody community, with an understorey of Themeda triandra. On the deep-soiled valley floors, particularly of the Mngeni and Mvoti Rivers, there would have been small patches of closed woodland, with the dominant tree being *mthombothi* (Spirostachys africana). Other riverine scrub would have been dominated by Acacia spp., such as sweet-thorn (Acacia karroo). On the upper margins of the dry valley scrub, on north-facing slopes, succulent communities with Aloe spp. and Euphorbia spp. would have occurred.

To the west of the coastal hinterland lies the interior. Here the main patterns of vegetation are as follows. The dry valley vegetation is continuous with that of the coastal hinterland, and around each river the valley vegetation gives way to thornveld as the altitude increases. The lower reaches of the midlands, up to about 900 metres (2 952 feet), are covered with Acacia sieberana grassland, like the coastal hinterland area. Above this altitude, where the topography becomes gently undulating and the river

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<sup>10</sup> See *ibid.*, pp. 40, 49-52, for information in this and the next paragraph.

valleys flatten out into large basins with extensive ridges in between, is grassland with scattered forests. The soils of the midlands are fairly deep and considerably leached. The summers are warm and wet, the winters cold and dry, and frost can be severe. Much of the midlands lies in a mistbelt. Before humans burnt the grasslands, it is probable that the drier grasslands would have been sweetveld, of Themeda triandra. On south-facing slopes, where areas were protected from fire, there would have been mixed Podocarpus forest. Some of the trees that would have grown on the warmer aspects were the bush willow (Combretum kraussii) and Natal mahogany. On the cooler aspects the common trees would have been the upright yellowwood, the falcate yellowwood, white stinkwood, wild peach (Kiggerlaria africana), Henkel's yellowwood (Podocarpus henkelii), black stinkwood (Ocotea bullata), the Cape chestnut (Calodendrum capense), and sneezewood (Ptaeroxylon obliquum).<sup>11</sup>

North of the Biggarsberg lies Northern Natal. The climate is similar to that of the midlands but there is less mist. The soil is poor and sandy. Primary woody plants were absent from the grasslands,<sup>12</sup> which were probably of Themeda triandra. On the slopes of the escarpment there would have been montane Podocarpus forests, which would have had fewer species present than in the mistbelt Podocarpus forest. The dominant species would have been the upright yellowwood, with another common species being the white stinkwood.

Rising out of the grassland are the uplands, above an altitude of 1 400 metres (4 593 feet). Here the topography is generally flat, grassy tableland, with some steep slopes to the mountains. The soil is highly leached, with the depth depending on the lie of the land. The summers are warm and moist, the winters cold and dry, with severe frosts. Snowfalls are common at the higher altitudes. The primary vegetation would have consisted of fire-maintained grassland of mixed composition, but mainly Themeda triandra, and on the south-facing slopes of the escarpment there would have been

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<sup>11</sup> See *ibid.*, pp. 40, 55, 56, 63, 66 for information in this paragraph.

<sup>12</sup> D. Edwards, A Plant Ecological Survey of the Tugela River Basin (Pietermaritzburg, Natal Town and Regional Planning Reports, 1967), vol. 10, p. 148.



montane Podocarpus forests.<sup>13</sup>

Concerning the fauna of Natal, we can draw only on the historical records, backed by information from a few archaeological sites, to provide a sketch of the animal life during the Iron Age and thereafter.<sup>14</sup> What follows does not therefore relate to the pre-agricultural period, but to the period of agricultural settlement.

Because of the variety of habitats in Natal, the range of fauna found was vast. Some animals were limited to a particular habitat. For example, shellfish, certain fish and birds, and turtles lived only in a marine environment, while other species of fish and birds were riverine, together with the hippopotamus and crocodile. Besides smaller animals, such as hares, wild pigs, baboons, monkeys and rock rabbits, there were herbivore of numerous species and in great numbers that moved according to their feeding habits. Forests, whether coastal or inland, were the habitat of elephant, the buffalo, blue duiker, red duiker, the grey duiker, bushbuck, as well as forest birds. In the dry and open savannah parts were the grazers and browsers such as steenbuck, the blue wildebeest and red hartebeest. In the uplands, there were mountain reedbuck, klipspringer and grey rhebuck. Predators found in association with the herbivores were lion, leopard, the black-backed jackal and hyena. Some of the large common birds were the Whitebellied Korhaan and the Stanley's Bustard, or pauw, which inhabited the open grassveld, while the Crowned Crane, the Crowned Guinea-Fowl and the Natal Francolin lived in thorny scrub. Ostriches were found on the grasslands of Northern Natal.

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<sup>13</sup> See Moll, Three Rivers Region, pp. 40, 67, 68 for information in this paragraph.

<sup>14</sup> T. Maggs, 'Mgoduyanuka: terminal Iron Age settlement in the Natal grasslands', Annals of the Natal Museum, 25 (1982), p. 102; T. Maggs, 'Msluzi Confluence: A seventh century Early Iron Age site on the Tugela River', Annals of the Natal Museum, 24 (1980), p. 133; T. Maggs and M.A. Michael, 'Ntshikane: an Early Iron Age site in the Tugela Basin, Natal', Annals of the Natal Museum, 22 (1976), pp. 726, 727; T. Robey, 'Mpambanyoni: A late Iron Age site on the Natal south coast', Annals of the Natal Museum, 24 (1980), pp. 153, 163; A.W. Drayson, Sporting Scenes Among the Kaffirs of South Africa (London, 1858), pp. 58-64; J.E. Methley, The New Colony of Port Natal with Information for Emigrants (London, 1849), pp. 28-31; H. Brooks ed. by R.J. Mann, Natal: a History and Description of the Colony, (London, 1876) pp. 106-65.

During the winter months in the historical period, large herds of herbivores namely blesbuck, zebra, wildebeest and quagga<sup>15</sup> descended the Drakensberg in search of grazing. Despite the huge number of animals feeding off the vegetation, it is possible that it suffered no long term damage, as the animals were browsers as well as unselective grazers. This means that they did not all have the same grazing habits, which, in turn, means that they probably did not overgraze the veld. If overgrazing did occur, the animals could simply move on to fresh grazing areas, leaving the veld to recover. Overgrazing was therefore either localised or transitory; areas would not have been constantly overgrazed.

## **2. Changes in forces acting on the environment during the Iron Age**

The ecological picture sketched above included a hunter-gatherer society for about half a million years. While it is accepted that these people appear to have been regulators of their environment,<sup>16</sup> they will not be discussed here. The first humans who do seem to have initiated significant changes in the environment belonged to a different culture from the Stone Age hunter-gatherers. They were Iron Age farmers, living in a period that is conventionally known as the Iron Age. What follows is not a description of the Iron Age in Natal, but rather a consideration of how this particular society interacted with the environment.

In southern Africa as a whole it is clear that Iron Age settlement was concentrated in the eastern part. Maggs has suggested that among the important environmental features that would have attracted Iron Age farmers were the availability of deep, preferably alkaline, soils, coupled with rainfall that was sufficient for the growth of African

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<sup>15</sup> J. Bird, 'Natal 1846-1851', first published in 1891, reprinted in Natalia, 1 (1971), p. 15; R.J. Mann, The Colony of Natal: an Account of the Characteristics and Capabilities of this British Dependency (London, 1859), p. 163.

<sup>16</sup> W. Beinart and P. Coates, Environment and History: The Taming of Nature in the U.S.A. and South Africa (London and New York, 1995), p. 4.

cultigens.<sup>17</sup>

In Natal, the present state of archaeological research suggests that Early Iron Age (EIA) farmers moved along the coastline, from north to south, in approximately 300 A.D.. As their earliest settlements lie within three kilometres of the shore, it is apparent that the farmers chose to live where the vegetation is thought to have been coastal forest. The evidence suggests that they lived for limited periods in small villages, near which they practised shifting agriculture. However, no proof of domesticated plants have yet been found at these early sites.<sup>18</sup>

Within a few hundred years EIA culture in Natal underwent considerable change, which meant that the way farmers exploited the environment changed too. It seems that some became less dependent on the sea, for they began to move inland, establishing communities up the river valleys. These were always below an altitude of 1 000 metres (3 280 feet), and were mostly in valley bottoms. It is possible that the gradual opening up of the coastal forest through their shifting agriculture allowed for the spread of grasslands, which enabled the farmers to become stock-keepers as well as agriculturalists. By at least the seventh century they were herding domestic animals namely cattle and caprines.

At about the beginning of the second millennium the Late Iron Age (LIA) began in Natal. It was marked by a further extension of settlement patterns. At the coast, settlements had been moving back beyond the 3 kilometre (1,8 mile) mark for years, while inland the farmers began to site them on valley sides, and then spilt out into the thorn scrub and grasslands. As from roughly 1400 the expansion into the grasslands was extensive.

Information on the Iron Age in Natal is drawn mostly from archaeological studies.

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<sup>17</sup> T. Maggs, 'The Iron Age sequence south of the Vaal and Pongola Rivers: some historical implications', *Journal of African History*, 21 (1980), p. 7.

<sup>18</sup> See *ibid.*, pp. 1-15 for the information in this and the next two paragraphs.

However, there are also written records, for the first document on this area dates from 1552, from a party of shipwrecked Portuguese.<sup>19</sup> There are several more records on this region dating between 1552 and c.1750, but none of them is comprehensive.<sup>20</sup> The evidence, whether archaeological or documentary, is therefore very fragmentary. Yet it is still possible to use it to suggest various ways in which Iron Age humans could have modified their environment.

Although we can make no estimate as to the population size in the EIA, we do know that by the LIA parts of Natal were still not inhabited.<sup>21</sup> It is possible that parts were densely settled. The basic production unit of the Iron Age society was the homestead, which was involved in mainly subsistence type production on land held in common tenure. With subsistence type production, no surplus was produced for exchange; exchange was unnecessary as the society was practically self-sufficient. The homesteads produced for their own purpose and that of their immediate political leader. Because there was no centralised state, there were no large, state-controlled undertakings in which the common people had to participate. For the common person, the only labour available would have been that provided by members of the homestead. Even a leader would have found it difficult to coerce large supplies of labour as the political units appear to have been small. The farmers' way of life involved the use of a wide range of natural resources, but the extent to which these were used depended on the demand for them as well as on the nature of Iron Age technology.

These considerations will now be linked in a discussion of the changes these people made to the landform, fauna and flora of Natal. Once this broad outline has been established, the specific details will be given relating to the narrow coastal belt, the coastal hinterland,

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<sup>19</sup> G.M. Theal (ed.), Records of South-Eastern Africa, (London, 1898, repr. Cape Town, 1964), vol. 1, pp. 128-149.

<sup>20</sup> *Ibid.*, vol. 1, pp. 128-49, 218-85; vol. 2, p. 283-346; vol. 8, pp. 71-137, 189-234, 297-360; C.R. Boxer (ed.), The Tragic History of the Sea, 1589 - 1622 (Cambridge, 1959) p. 70-122; J. Bird, The Annals of Natal, 1495 to 1845, (Pietermaritzburg, 1888), vol. 1, pp. 24-60.

<sup>21</sup> Theal, Records, vol. 2, p. 316; H. Slater, 'Transitions in the political economy of south-east Africa before 1840', (unpublished D.Phil. thesis, University of Sussex, 1976), p. 120.

and the inland area.

The only landform changes the farmers effected were as a result of their quarrying and mining. They quarried sandstone for the grindstones that they used for crushing vegetable matter, and they mined iron ore and smelted it for weapons, hunting implements, agricultural and bush clearing tools, and ornaments.<sup>22</sup>

Because both sandstone and iron ore were found over wide areas of Natal, the farmers' activity during the EIA was not concentrated within a specific region. It appears, however, that during the LIA iron smelting ceased to be carried out at most settlements but became a skill executed by specialists. Evidence to date shows that such specialist communities were concentrated where resources of both iron ore and hardwoods, necessary for making charcoal, were available.<sup>23</sup> As the demand for the products was limited, and the technology for mining operations was probably only an iron-headed pick, the scale of activities was small. Any changes made in the landform were therefore hardly noticeable.

The farmers would have altered the existing flora in several ways. Each of their demands will be discussed separately. First, they depended on local flora for building material as well as for making certain utensils. Impressions of thatch and poles in clay have been found from some of the valley sites, suggesting that where the material was available, people lived in thatched huts made of pole and daga walls.<sup>24</sup> They would have needed timber for stockpens, and those who lived near water may even have had boats.<sup>25</sup> It is likely that they made utensils such as baskets, mats and brooms from reeds and grasses. In addition, they probably cut timber for weapons, drinking vessels, head-rests, trays,

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<sup>22</sup> Maggs, 'Mgoduyanuka', p. 102; Maggs, 'The Iron Age Sequence', pp. 5, 7.

<sup>23</sup> T. Maggs, 'Mabhija: a pre-colonial industrial development in the Tugela Basin', Annals of the Natal Museum, 25 (1982), p. 123-141.

<sup>24</sup> Maggs, 'Msluzi Confluence', p. 133; Maggs and Michael, 'Ntshekane', pp. 726, 727.

<sup>25</sup> Maggs, 'The Iron Age Sequence', pp. 7, 8.

spoons and other goods.<sup>26</sup>

Secondly, Iron Age people would have collected fuel for domestic use from the surrounding vegetation. They also needed fuel to fire pottery and to smelt iron.

The farmers used a method of shifting agriculture. Their farming therefore involved the perpetual destruction of vegetation. They made gardens for their staple crops by clearing away existing plants as much as was considered necessary. This was probably accomplished by slash and burn methods, with big trees being ring-barked. When the soil became exhausted the farmers simply made new gardens.

Once the farmers became stock-keepers they brought fresh forces into play on the vegetation of Natal. Their sheep, cattle and goats were new species of animals grazing in the environment; these introduced species competed with game for grazing. However, their grazing habits were very different from those of the wild animals. The range of wild herbivores included grazers and browsers. These fed on both the woody and herbal components of the vegetation, thereby helping maintain a balance in their proportions. Modern ecological theory would argue that when the farmers brought in domesticated animals, they initiated changes in the composition of the veld through a combination of three factors.

First, the existing ratio of grazers to browsers was upset. Although we do not know the proportion in the past of goats (which are browsers) to cattle (which are grazers), it is believed that the grazers would have predominated.<sup>27</sup> This means that the woody plants would not have been used as a food source to the extent that they had been previously, so the balance between woody and herbaceous plants would have been upset. The woody plants would consequently have begun to encroach at the expense of the herbs. Secondly, cattle and sheep prefer certain grasses, so if they graze an area continuously,

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<sup>26</sup> E.J. Krige, The Social System of the Zulus (London, 1936, repr. Pietermaritzburg, 1950), pp. 395, 396, 398.

<sup>27</sup> B.H. Downing, 'Environmental consequences of agricultural expansion in South Africa since 1850', South African Journal of Science, 74 (November 1978), p. 421.

then those preferred grasses are reduced and less palatable grasses come to dominate the herb layer. Thirdly, it is likely that the farmers would have burnt the veld to obtain green grazing. Whereas natural fires would have occurred during the thunderstorm season of late spring, the farmers would probably have burnt when the grass was dry, during late summer, autumn or winter.<sup>28</sup> By doing this they would have altered the natural fire regime though the impact would have been different from one ecosystem to another, which will be considered at the appropriate place in this study.

A wide spectrum of fauna was available to the farmers as a protein source. They could collect food such as shellfish and tortoises, they could fish, or snare small animals like hares or duiker, or they could hunt larger animals.<sup>29</sup> Hunting must have been an essential facet of their existence, not only to provide food but also to safeguard their lives and stock. For most people it was probably an activity that was part of a mixed economy.

Food collecting, fishing and snaring could have been done by individual members of a homestead. On the other hand, hunting for large animals such as elephant, buffalo and hippopotamus required the co-operative activity of groups of hunters.<sup>30</sup> They constructed pits which had sharpened stakes in them, and the pits were camouflaged by a screen of vegetation. Once an animal had fallen in, hunters speared and hamstrung it. Hunters could also drive game into narrow gorges where others lay in wait to spear the animals.

While their only weapons were spears and axes, a large group of hunters would have been able to capture a substantial bag on a hunt. However, as the farmers needed to ensure a fairly regular supply of protein, it was not in their interests to overhunt. Through the centuries a long-term balance between humans and wild animals must therefore have been achieved. Because of this balance, it is probable that the only effect

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<sup>28</sup> Moll, *Three Rivers Region*, pp. 32, 33.

<sup>29</sup> Maggs, 'Mgoduyanuka', pp. 112, 116, 119; Maggs, 'Msluzi', pp. 135, 143, 144; Maggs and Michael, 'Ntshekane', pp. 731, 734, 735; Robey, 'Mpambanyoni', pp. 153, 163.

<sup>30</sup> Hedges, 'Trade and politics', pp. 58, 59.

the presence of Iron Age farmers had on the fauna was that they may have caused herds to concentrate in those areas where there were fewer people.

Although the Indian Ocean trade was established at about the beginning of the second millennium A.D., the international economy does not seem to have penetrated as far south as Delagoa Bay until the arrival of the Portuguese there in the mid-sixteenth century. From then onwards, ivory was exported spasmodically from Delagoa Bay.<sup>31</sup> This trade seems to have influenced the region north of the Thukela fairly early on but there is no firm evidence as to when the area south of the river first became involved in producing ivory for the international market. The earliest mention of elephant hunting for trade articles in Natal dates back to 1589.<sup>32</sup> Certainly from 1687 onwards both English and Dutch called sporadically at Port Natal for ivory, but the trade was neither large nor regular.<sup>33</sup> Because of these facts, it is unlikely that the trade caused much of a change in the productive patterns of the Natal farmers.

## 2.i *Interaction with the coastal environment*

The coastal zone was continuously settled by Iron Age people for about 1 500 years. In discussing any changes that the farmers made to the coastal environment during this period, some useful analogies can be drawn from the work of Hall, for the Iron Age occupation of Zululand was of similar duration to that of Natal.<sup>34</sup>

In the first place, he has argued that the farmers may have helped determine the pattern of coastal lacustrine and lagoonal sedimentation.<sup>35</sup> This may have occurred because as they cleared agricultural land in the river catchment areas, the chance of soil erosion

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<sup>31</sup> Ibid., pp. 109-242.

<sup>32</sup> Boxer, *The Tragic History*, p. 70.

<sup>33</sup> Bird, *Annals*, vol. 1, pp. 35-60.

<sup>34</sup> Hall, 'The ecology of the Iron Age'.

<sup>35</sup> Ibid., p. 233.



during the seasonal flooding was increased; when the silt was washed downstream it would have settled on the margins of lakes and estuaries, thereby altering their size. In Natal, much the same could have happened.

As agriculturalists, they needed fertile soil for gardens, of which they appear to have had a fairly rapid turnover. Fertile soil was probably an integral part of the coastal forest, so the farmers had to clear the primary vegetation to use the soil. But, Hall has argued that once the forests were cleared, the soil's nutrient content would have decreased rapidly so that the soil became leached.<sup>36</sup> Consequently, the farmers would have needed to clear new plots frequently. This means that over a period of time they would have cleared considerable areas of forest.

When gardens were abandoned, secondary vegetation would probably have encroached. According to Moll, this would have been in the form of secondary grasslands, with Aristida junciformis as the dominant grass.<sup>37</sup> If left long enough, Acacia scrub would also have encroached.

Once the farmers had become stock-keepers, they would have used grazing from the palm veld and the secondary grasslands for their animals. Presumably they would have burnt this when they considered it necessary. As already discussed, this practice could have altered the natural fire regime and contributed to a change in the composition of the grasslands. Instead of Themeda triandra as the dominant grass of the palm veld, it would have been replaced by Aristida junciformis.<sup>38</sup>

Because the farmers occupied the coastal zone for centuries, they must have affected the forest there in several ways. Their method of shifting agriculture would have caused considerable diminution of the forest. Also, it is possible that, over time, they altered the composition of the remaining forest. Given the limit of their technology they may

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<sup>36</sup> Ibid., p. 230.

<sup>37</sup> Moll, Three Rivers Region, p. 36.

<sup>38</sup> Ibid., p. 36.

have opted to fell the smaller, sub-canopy trees when they needed timber for any purpose, leaving the large, canopy trees standing.

There is, as yet, no clear evidence that the farmers exploited fauna in the coastal zone during the EIA. However, as they did make use of animals for food during the LIA they probably did so during the EIA too. From the limited evidence available on the LIA it appears that the coastal farmers used a wide range of animals for food. At Mpambanyoni, a site on the south coast dating from about 1100, remains of shellfish, fish, reptiles, birds and mammals were found.<sup>39</sup> The most common mammalian remains were those of cane rats, bush pigs, blue duiker and bushbuck; even so, these were not in such large numbers as to suggest that the populations of these species must have suffered through the farmers' predation. The only animal that appears to have been selectively exploited was the brown mussel, *Perna perna*. Hall argues on the basis of his research that exploitation of this shellfish was very heavy on the Zululand coast, especially during the sixteenth century.<sup>40</sup> The same may well have applied to Natal too.

Documentary records to the mid-eighteenth century reflect a similar picture of the use of fauna as food. They mention farmers in the coastal region collecting mussels, catching fish, and hunting wild pigs, antelope, buffalo, elephant and lions.<sup>41</sup> At times, when the market was available, such as in 1627 and 1643, the trade in ivory led to farmers destroying hippopotamus and elephant in particular. Even though Portuguese parties in the first half of the seventeenth century found a great number of pits in the vicinity of the bay, and to the north of it,<sup>42</sup> which suggests concentrated hunting in that area, it still seems unlikely that the spasmodic ivory trade greatly affected the size of the elephant and hippopotamus populations.

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<sup>39</sup> Robey, 'Mpambanyoni', p. 153.

<sup>40</sup> M.J. Hall, 'Enkwazini, an Iron Age site on the Zululand coast', Annals of the Natal Museum, 24 (1980), pp. 97-109.

<sup>41</sup> Theal, Records, vol. 1, p. 233; *Ibid.*, vol. 8, pp. 205, 313, 314, 318, 342.

<sup>42</sup> *Ibid.*, vol. 8, pp. 223, 313, 342, 343.

## 2.ii Interaction with the coastal hinterland environment

Evidence of the Iron Age is very scant for the coastal hinterland environment. Such as it is, it suggests that the only important environmental changes concerned the vegetation. These will be discussed first in relation to the river valleys, then the wooded grasslands.

Valley dwellers would have opened up the valley woodland as they felled trees such as *mthombothi* and Acacia spp. for their timber requirements. In terms of their agriculture, they would have cleared the primary vegetation from pockets of alluvial soil. These would have contained rich, relatively unleached soil which would have retained its fertility longer than did the coastal soil once it had been cleared. Hall has suggested that this would have enabled less frequent shifting of gardens than occurred in the coastal zone.<sup>43</sup> This, in turn, would mean that valley dwellers would have destroyed less primary vegetation than the coastal dwellers. According to Moll, the secondary vegetation in the valleys would have been scrub encroachment of Acacia spp..<sup>44</sup>

Both valley and grassland dwellers had good grazing available for their livestock. In the valleys, the sweet understorey was Themeda triandra; the dominant grass of the Acacia sieberana grasslands was also possibly Themeda triandra. This sweetveld is sparse and so it would have been easily damaged through overgrazing and then burning. On the grasslands, according to Moll, this would have encouraged Aristida junciformis to encroach, whereas in the valleys Sporobolus and Eragrostis spp. would have become the dominant species.<sup>45</sup> These changes would have reduced the grazing potential of the veld.

The people living in the grasslands could have drawn on the scattered Acacia sieberana trees for their timber supplies. This would have reduced the quantity of woody vegetation on the grasslands. Where they destroyed the primary vegetation through clearing for agriculture, secondary vegetation would have encroached. This would have

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<sup>43</sup> Hall, 'The ecology of the Iron Age', p. 232.

<sup>44</sup> Moll, Three Rivers Region, p. 80.

<sup>45</sup> *Ibid.*, pp. 80, 81.

been Aristida junciformis grassland.

### 2.iii Interaction with the midlands and uplands environment

As has already been outlined, settlement of the midlands and uplands during the EIA was limited to the valley floors below an altitude of 1000 metres (3 280 feet). This means that during the EIA the environment of the valley sides and the upper grasslands remained intact. The impact made by the valley dwellers in the valleys of the interior would have been the same as that already outlined for the coastal hinterland. What needs elaboration here are two features relating to the environment during the LIA.

The first feature concerns the dispersed settlement of farmers on the grasslands. Maggs has outlined the problems facing these people and has made some suggestions as to how they solved them.<sup>46</sup> Where grazing proved insufficient, they must have learnt to practise transhumance. They could have rested the sweetveld of the valleys in early summer by burning the grasslands. The resultant green grazing would have lured the herbivores out of the valleys on to the grasslands. When this grazing was no longer nutritious, that is, at the end of summer, the stock could then graze in the valleys. The selective grazing of the livestock, together with summer burning, would have led to changes in the veld composition. According to Moll, at altitudes between 600 and 1 100 metres (1 968 and 3 608 feet) the Themeda grassland would have been replaced by Themeda-Hyparrhenia grassland, whereas in the upland areas, at altitudes of 1 370 metres (4 494 feet), it was replaced by Aristida junciformis.<sup>47</sup>

The second feature concerns the establishment of specialized iron-working communities. Several riverside sites of such communities have been located in the Thukela basin. Details of one in particular, twenty kilometres down the Thukela River from present-day Colenso and dating from between 1690 and 1840, provide insight for this study.<sup>48</sup>

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<sup>46</sup> Maggs, 'The Iron Age sequence', pp. 11-15.

<sup>47</sup> Moll, Three Rivers Region, pp. 82, 83.

<sup>48</sup> Maggs, 'Mabhija', pp. 123-142.

Oral evidence from elderly people living in the vicinity of the site gave *mthombothi* as one of the timbers that had been used in the smelting process at the site. Studies of the charcoal suggest that Acacia spp. were used. Because of the concentration of iron-working communities in certain areas of the river valleys, it is possible that the woodland in these regions became stripped of the species of tree favoured by the smelters, namely those that would have provided the high temperature necessary for smelting.

#### 2.iv Summary

It is clear from the foregoing pages that Iron Age humans may have caused several changes in the Natal environment before 1824. It is useful to summarize these in order to establish what the environment was like directly before the hunter-traders arrived.

The most obvious changes would have been in the flora, with the destruction of woody communities, and a change in the composition of grasslands. At the coast, much of the woody vegetation would have been cut from the coastal forests. The cleared areas would have been invaded by secondary vegetation, with Aristida junciformis grassland.

In the valleys of the coastal hinterland, again much of the primary woody vegetation would have been cleared and so secondary scrub encroachment of Acacia spp. would have occurred. The composition of the understorey would have been altered, so that Themeda triandra would have been replaced by Sporobolus and Eragrostis spp.

As far as the fauna are concerned, it seems that in one case that we know of, that of the brown mussel, human exploitation may have been very heavy by the sixteenth century. For the other animals, we can speculate that the major changes were as follows. First, animals would probably have moved away from areas that were inhabited by humans. The grassland fauna, for example, should have been relatively unaffected by human settlement until after 1400. Secondly, animals would probably also have tended to move from habitats that had been affected by human agency, such as the riverine woodland and the coastal forest.

### 3. Changes in forces acting on the environment between 1824 and 1836

In 1824 a small group of British hunter-traders from the Cape Colony arrived and set up base at Port Natal. Although over the next twelve years the group grew in size, it never numbered more than about thirty members. But even these few transfrontiersmen made a specific impact on the environment, for they had very different aims of production from those of the Iron Age farmers around them. Where the farmers produced subsistence goods, tribute for the Zulu king and perhaps a few commodities, the hunter-traders intended concentrating on producing commodities, particularly ivory and hides, for the international market.<sup>49</sup>

Ivory was used overseas in the manufacture of luxury goods such as piano keys, billiard balls and false teeth.<sup>50</sup> Its high value per unit weight made it a lucrative trade article, whereas hippopotamus and buffalo hides, which were shipped to the Cape Colony for the manufacture of 'trektouws',<sup>51</sup> were far less profitable. The hunter-traders' demand for these products meant that Natal would now be subjected to the same kind of pressures that the area north of the Thukela had been since the 1750s, when a base for international trade was established at Delagoa Bay.

In their production of commodities the hunter-traders were able to profit from certain conditions that gave them easy access to game in Natal. As there were no intermediaries for trade, they dealt directly with the Zulu king and entered into a client relationship, first with Shaka and later with Dingane, where in return for hunting and trading privileges they promised military aid.<sup>52</sup> It appears that they were able to hunt as freely

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<sup>49</sup> According to Beinart and Coates, this type of hunting is typical of frontiersmen and transfrontiersmen who hunted for subsistence and trade. For discussion on this see Beinart and Coates, Environment and History, pp. 20-4.

<sup>50</sup> L. Grout, Zululand, or Life among the Zulu-Kafirs (London, 1863), p. 296.

<sup>51</sup> G. Champion, Journal of the Rev. George Champion, American Missionary in Zululand, 1835-9, ed. A.R. Booth (Cape Town, 1967), p. 65.

<sup>52</sup> H.F. Fynn, The Diary of Henry Francis Fynn, 1803-1861, ed. J.S. Stuart and D.McK. Malcolm (Pietermaritzburg, 1950, repr. Pietermaritzburg, 1969), pp. 122, 123, 249, 250, 256; C. Ballard, 'Traders, Trekkers and colonists', in A. Duminy and B. Guest (eds.), Natal and Zululand from Earliest Times to 1910 (Pietermaritzburg, 1989), p. 118.

as they liked for there was no governing body among them to control their exploitation of game; neither did the Zulu king generally restrict their hunting. Further, it is possible that the disruptions caused by the period of warfare and social upheaval of the Shakan wars generally reduced the hunting done by black farmers, besides causing large tracts of land to be unoccupied. In these circumstances the game may well have increased, according to an account written at a later date by John Bird, a colonial official of the 1840s and 1850s.<sup>53</sup> Certainly the records of transfrontiersmen such as Nathaniel Isaacs, Henry Francis Fynn and the missionary Allen Gardiner indicate that there was an abundance of game in Natal in the 1820s and 1830s.<sup>54</sup>

The hunter-traders' access to hunting and commodities acquired from hunting was also facilitated by their employment of black people.<sup>55</sup> Their use of Africans as carriers no doubt enabled the hunters to extend their operations considerably, thereby increasing the destructive impact they made on specific game resources. Of far greater importance, however, was the way the commercial stimulus provided by the hunter-traders caused a few Africans to change their productive activities dramatically.<sup>56</sup> Some were employed directly by the hunter-traders. They went out armed with firearms to hunt only those particular animals which provided commodities for the external market: elephant, hippopotamus and buffalo. Others intensified their hunting, using their own weapons, to produce goods for barter with the whites.

The technology of the hunter-traders was so superior to that of the black farmers that it vastly increased the impact the group made on the environment. They had a good supply of firearms for hunting which they used themselves, issued to their black hunters

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<sup>53</sup> Bird, 'Natal: 1846-1851', p. 11.

<sup>54</sup> For discussion on this see below section on 'Effects of human activity on the fauna'.

<sup>55</sup> Fynn, Diary, p. 130; Champion, Journal, p. 49; A.F. Gardiner, Narrative of a Journey to the Zoolu Country in South Africa (London, 1836, repr. Cape Town, 1966), pp. 407, 408.

<sup>56</sup> N. Isaacs, Travels and Adventures in Eastern Africa, 1836, ed. L. Herrman, (Cape Town, the Van Riebeeck Society, nos. 16 and 17, 1936-37), vol. 1, pp. 31, 53; *Ibid.*, vol. 2, pp. 37, 59, 164; J.B. Wright, Bushmen Raiders of the Drakensberg 1840-1870 (Pietermaritzburg, 1971), p. 34; Hedges, 'Trade and politics', pp. 56-57.

or traded with Dingane. They had wagons for transporting quantities of goods on land, and they had access to ships which brought in supplies from the Cape and collected comparatively large loads of trade articles at one time. They also brought in forms of cutting instruments that had not been used in Natal before. The black farmers at the time used tools such as iron-axes for cutting, but, as an observer noted in 1836, their axes were suitable for clearing small bushes only.<sup>57</sup> By contrast, the tools of the whites must have included large, efficient saws as they were able to fell even tall trees with relative ease.<sup>58</sup> They were therefore in a position to make a specific impact on the environment, the nature and scale of which will now be discussed in relation to the flora and fauna.

### 3.i Effects of human activity on the flora

The hunter-traders caused few changes in the flora of the bay area as their demands on it were light and their numbers small. They did, however, make some impact as they cleared vegetation for human settlement, used it as a source of energy, and exploited certain species selectively as the raw materials for building activities.

Like the black people living around them, the hunter-traders cut down reeds and bush when they cleared patches near the bay for their dwellings and gardens.<sup>59</sup> They used reeds, especially from near the Mhlathuzana River, for roofing material,<sup>60</sup> collected firewood for domestic purposes, and cut timber for housing and furniture. Mangrove poles from the mangroves around the bay provided the wattling for the framework of their huts.<sup>61</sup> It is possible that any locally made furniture was also of mangrove wood. Certainly, the mangroves must have been cut into extensively in 1836 when the Mlazi

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<sup>57</sup> Champion, Journal, p. 58.

<sup>58</sup> Isaacs, Travels, vol. 2, p. 36; C.R. Maclean, The Natal Papers of 'John Ross', ed. S. Gray (Pietermaritzburg, 1992), p. 78.

<sup>59</sup> Gardiner, Narrative of a Journey, p. 84.

<sup>60</sup> Killie Campbell Africana Library, KCA 95, Map of Capt. W.T. Haddon, 1835. An area of 'good thatching reeds' is noted on this map, near the Mhlathuzana River.

<sup>61</sup> Gardiner, Narrative of a Journey, p. 84.



mission of the American Board of Commissions for Foreign Missions was being established, for the missionary employed about thirty men to fell mangrove poles.<sup>62</sup>

The hunter-traders placed an entirely new demand on the local timber resources near the bay through felling timber suitable for ship and wagon-building. Even though these activities were not carried out intensively, they deserve comment because they arose from the need of a society to maintain commercial links with the Cape, a pressure which had not previously been brought to bear on the Natal environment. Coastal forest on the bay side of the Bluff and the head of the bay provided adequate timber for the construction of a small ship in 1825.<sup>63</sup> Five years later Isaacs led a party that cut 50 tonnes (50 tons) of ship timber to be used as ballast on a ship.<sup>64</sup> Isaacs did not record the locality of this timber, nor its type, but it is probable that they exploited the same sites used earlier.

In order to transport their trade goods and collect the skins and ivory, the hunter-traders needed wagons. Although some were brought overland from the Cape Colony, it seems that wagons were also built in Natal in the 1830s by the carpenter John Cane. It is recorded that he had a wagon-making establishment at the west end of the bay, but there is no account of the type or quantity of timber he used.<sup>65</sup> It is likely that, in all these cases, the timber used would have been hardwood: the hunter-traders must have selectively exploited trees like stinkwood, ironwood, yellowwood and white pear. Clearly, the removal of these canopy trees would have altered the composition, however slightly, of the forests on the Bluff and at the west end of the bay, until the remaining trees seeded themselves.

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<sup>62</sup> Champion, Journal, pp. 57-59.

<sup>63</sup> Isaacs, Travels, vol. 1, pp. 44, 124; C. de B. Webb and J.B. Wright (eds.) The James Stuart Archive, vol. 3, (Pietermaritzburg, 1982), evidence of Mcoyoyi kaMnini, p. 66; Maclean, The Natal Papers of 'John Ross', p. 60.

<sup>64</sup> Isaacs, Travels, vol. 2, p. 36.

<sup>65</sup> C. de B. Webb and J. B. Wright (eds.) The James Stuart Archive, vol. 1, (Pietermaritzburg, 1976), evidence of Dinya kaZokozwayo, p. 111.

### 3.ii Effects of human activity on the fauna

Unlike the Iron Age farmers who killed a wide variety of animals, mainly for food, the hunter-traders exploited three species very heavily in order to obtain skins and ivory for trade: elephant, hippopotamus and buffalo. In addition, they also needed to kill animals for food and to protect their lives and property.

The main object of the hunter-traders was to acquire ivory. As an elephant provides far more ivory per head than a hippopotamus, elephant became the main quarry of the hunter-traders. Whether they shot the elephant themselves, or employed hunters, or traded for the ivory, it is clear that through their demand for ivory many elephant must have been destroyed. This is deduced partly from a study of the export statistics on ivory. All ivory from Natal had to be transported to the Cape Colony to be exported from there, mainly to North America.<sup>66</sup> The statistics do not state the origin of the ivory so one cannot comment with certainty on the Natal contribution. One can simply make inferences. The quantity of ivory exported in 1824, before the hunter-traders could have shipped much to the Cape, just exceeded 9 072 kilograms (20 000 lbs); by the following year, however, the quantity had increased dramatically to over 48 080 kilograms (106 000 lbs).<sup>67</sup> The successful hunting activities of the hunter-traders of Natal must have been one of the main reasons for the market increase in the ivory trade. But, as Pridmore has pointed out, over the next few years the ivory exports dropped back to the 1823-1824 level.<sup>68</sup> Whether this was because the resources of Natal and Zululand had been temporarily exhausted by the intensive hunting, or because the Zulu king imposed regulations on hunting or trading, cannot be stated. Certainly, in the 1830s individual traders were still able to acquire ivory in considerable quantities. B. Norden, for example, on one occasion in 1836, traded at least 2½ tonnes (2½ tons) of ivory from

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<sup>66</sup> Beinart and Coates, Environment and History, p. 21.

<sup>67</sup> S.D. Neumark, Economic Influences on the South African Frontier, 1652-1836, (Stanford, California, 1956), p. 67.

<sup>68</sup> J. Pridmore, 'The impact of the European traders on Port Natal 1824-1834: A look at Environment and Society' (paper presented at Economic History Conference, Pietermaritzburg, 1992), p. 6.

Dingane.<sup>69</sup> However, even after a decade of such exploitation there were still elephant in Natal. Their tracks were seen near the bay in December 1835, although the observer commented that the animals no longer showed themselves very often 'around Natal'.<sup>70</sup> He was probably referring to the immediate bay area, for they were certainly seen up the north coast in 1836.<sup>71</sup>

Hippopotamus were shot for ivory, hides and meat. Few of the records concerning ivory from this period distinguish between that of hippopotamus and elephant, so one cannot comment with any certainty on the scale of destruction of hippopotamus. However, the details available from one of Fynn's hunts suggests that the hunter-traders killed hippopotamus in large numbers. On a trip to the Mlalazi River in January 1827, Fynn and his hunters shot about 50 hippopotamus, from which they obtained about 320 kilograms (700 lbs.) of ivory.<sup>72</sup> We know that the hunter-traders killed hippopotamus during winter at the Thukela.<sup>73</sup> They could also have shot them nearer at hand, at the bay, in the Mngeni and in the Sea Cow Lake just north of the Mngeni. It appears that they did not make much impact on the hippopotamus population in the Thukela and the Sea Cow Lake, for in 1836 there were still large herds in both these localities.<sup>74</sup> Hippopotamus numbers at the bay, however, seemed to have dropped sharply over the years. In the mid-1820s the bay abounded with hippopotamus.<sup>75</sup> A contemporary chart of it indicates their grazing ground at the west end, where herds of up to 50 hippopotamus were reportedly seen;<sup>76</sup> by 1835 the records no longer mention the

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<sup>69</sup> G. Mackeurton, The Cradle Days of Natal, (First published Longmans, 1930, repr. Durban, 1972), p. 187.

<sup>70</sup> Champion, Journal, p. 7.

<sup>71</sup> *Ibid.*, p. 62; Gardiner, Narrative of a Journey, p. 147.

<sup>72</sup> Isaacs, Travels, vol. 1, p. 152.

<sup>73</sup> Champion, Journal, p. 45.

<sup>74</sup> *Ibid.*, pp. 45, 49; Gardiner, Narrative of a Journey, p. 85.

<sup>75</sup> Maclean, The Natal Papers of 'John Ross', p. 52.

<sup>76</sup> Fynn, Diary, p. 54; F.G. Farewell, 'Transcriptions from notes and journals made while in Natal', in P. R. Kirby (ed.), Andrew Smith and Natal (Cape Town, 1955), p. 58.

presence of herds there, and hippopotamus tracks were seen only occasionally.<sup>77</sup>

The least profitable of the animals shot by the hunter-traders for trade was the buffalo, for this was killed for its hide only. A contemporary account gives an idea of the activity of the buffalo hunters:

'We met a large number of the whites and Hottentots of Natal with many natives each having a gun on his shoulder, hastening to the buffalo districts. They return as soon as a waggon load of hides, consisting of 10 or 15 is obtained and go out again to their perilous work.'<sup>78</sup>

The description indicates that buffalo shooting was concentrated, at least in 1836, in certain 'Buffalo districts'. These appear to have been on the north coast, where buffalo were numerous.<sup>79</sup> There are no figures from which to estimate the number of buffalo killed, but one clue suggests that the herds inhabiting the coastal bush must have been considerably thinned by the hunters. The whites had to import salt to preserve the hides. It is recorded that 'Cane also traded in buffalo hides, for which salt was brought to Natal'.<sup>80</sup> Despite this apparently intensive activity, buffalo were still numerous on the coast in June 1836 when it was possible to sight, in one day, three buffalo herds of 'some tens, perhaps a hundred', north of the port.<sup>81</sup>

Besides killing animals to provide trade articles, the hunter-traders killed any carnivorous animals at the bay that threatened their safety. They shot lion, leopard, hyena and jackal as well as laying traps for them,<sup>82</sup> but there is no evidence to suggest that they ever banded together in a concerted campaign to exterminate these species.

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<sup>77</sup> Champion, Journal, p. 8.

<sup>78</sup> *Ibid.*, p. 49.

<sup>79</sup> *Ibid.*, p. 62; Gardiner, Narrative of a Journey, p. 147.

<sup>80</sup> Webb and Wright, The James Stuart Archive, vol. 1, evidence of Dinya kaZokozwayo, p. 112.

<sup>81</sup> Champion, Journal, p. 65.

<sup>82</sup> Gardiner, Narrative of a Journey, pp. 226, 227; Isaacs, Travels, vol. 2, p. 262.

There are very few references in the surviving records on the hunter-traders killing animals for food, presumably because this was so everyday an occurrence that they did not bother to comment on it. As their supply of provisions from the Cape was erratic, they must have depended on the fauna of the bay area for meat and fish. Certainly they ate fish and turtles which the local Africans caught.<sup>83</sup> It is likely that they also ate birds and some of the buck that were seen so frequently.<sup>84</sup>

### 3.iii *Summary*

By 1836 the state of the environment in Natal reflected the aims of production of the hunter-traders. They had left the local bush undisturbed except for where they felled timber near the bay. They had exploited three species of animal for commodities for trade for the international market: elephant, hippopotamus and buffalo. With so few records of the activities of the hunter-traders available, it is impossible even to guess at the number of the animals they shot. Despite this destruction, however, all three species were still found in Natal in 1836.

The hunter-traders must have concentrated their hunting in the bay area but, through their hired hunters, the impact of their hunting was increased and extended beyond the bay. One of the hunter-traders commented on how their hunting had affected the distribution of the game:

‘The country of the Zoolas... is much infested with wild beasts, and those of every species indigenous to the African continent: at Natal, however, and for a large space around it, they have been greatly disturbed, and have gone further inland, fearing the effects of our fire arms.’<sup>85</sup>

He also remarked on the fact that the populations of certain species had diminished in number. This list included those that provided commodities for trade, or threatened the

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<sup>83</sup> Maclean, *The Natal Papers of ‘John Ross’*, p. 53; Fynn, *Diary*, p. 61; Gardiner, *Narrative of a Journey*, p. 86.

<sup>84</sup> *Ibid.*, pp. 320, 326, 328, 340, 347; Champion, *Journal*, p. 51.

<sup>85</sup> Isaacs, *Travels*, vol. 2, pp. 265, 266.

safety of the whites.<sup>86</sup> Those species which could serve no commercial purpose to the hunter-traders, such as fish, crocodiles and antelope, seem to have been left largely alone. Since much of the hunting was confined to the coastal area it meant that the animals living further inland did not decrease in number. Certainly, the comments of a traveller to the interior of Natal in 1835 indicate that antelope were abundant there for he saw herds of eland, hartebeest and wildebeest.<sup>87</sup>

#### 4. Changes in forces acting on the environment between 1837 and 1844

Late in 1837 about 4 000 Boers came to settle permanently in Natal. After the defeat of Dingane they proclaimed the Republic of Natalia, which nominally extended in the north to the Black Mfolozi River, inland to the Drakensberg, and south to the Mzimvubu River. As the arrival of the Boers in such numbers meant that the white society in Natal became Boer-dominated, it is necessary to examine the nature of this society to see if new forces were brought to bear on the environment.

The establishment of the Republic instituted a new political regime in Natal. The Boers vested supreme power in the hands of a representative body, the Volksraad, which sat regularly in the capital. Among its duties it appointed the officials necessary to carry out the administration. Each of the twelve wards of the republic was under a field cornet, and each ward put forward two people annually for the Volksraad. Because the Boers wished to secure their land claims, they empowered the Volksraad with the necessary legislative, administrative, and political authority to confer and protect their claims. Although the powers of the Raad were extensive in theory, in practice its effectiveness was restricted.<sup>88</sup> Part of the explanation for this lay in the difficulties it faced in communicating with a scattered society that had many divisions within it, as well as in the very limited amount of revenue it had at its disposal.

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<sup>86</sup> Ibid., p. 266.

<sup>87</sup> Gardiner, Narrative of a Journey, pp. 320, 326, 340, 347.

<sup>88</sup> G. M. Theal, The Republic of Natal (first published Cape Town, 1886, repr. Cape Town, 1961), p. 4.

Boers who wished to lead a settled life aimed to institute an official system of private tenure of land through a rigorous system of claiming and registering property. Once this was done, an individual would be free to use the resources on his property as he saw fit. The Boer farmers, who were mostly pastoralists, rapidly claimed what they judged to be the best pasture land. They spread out quickly, choosing extensive farms on the Upper Thukela, in the Klip River basin, and on the land around the Bushmansrand where Pietermaritzburg was located.<sup>89</sup> On paper, the extent of their land claims was enormous, being only slightly less than the area of the entire Republic.<sup>90</sup> The dispersal of the population meant that there was little land left unclaimed and therefore available to newcomers.

Certainly most Boers were cattle ranchers. Wherever they set up a ranch their demands would have been similar. They would have wanted timber as a building material, fuel for domestic use, and game for meat; they would have wanted good grazing veld for their livestock, and they would have cleared a patch of natural vegetation, near the homestead, to plant crops for their own consumption. The distribution of their livestock resources was uneven, for while some owned only a few animals, others owned thousands.<sup>91</sup> Clearly with this difference in wealth went differences in status and political power. There may well have been some cattle ranchers who were commercial producers, but far more research needs to be done in this field before anything concerning them can be stated with confidence. For this study it is sufficient simply to note that where the Boers aimed to make a profit through their cattle, they must have exploited the veld more intensively. They probably burnt pastures regularly to ensure grazing, and may have overgrazed areas.

Very few Boers were agriculturalists. Presumably this type of farmer would have

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<sup>89</sup> For a discussion of farm size and distribution see A.J. Christopher, 'The initial European farm pattern in Natal 1837-1848', Journal for Geography, 3, no. 2 (1968), pp. 166-77.

<sup>90</sup> A.J. Christopher, 'Natal: a study in colonial land settlement' (unpublished Ph.D. thesis, University of Natal, Durban, 1969), p. 59.

<sup>91</sup> Bird, Annals of Natal, vol. 1, letter from the Graham's Town Journal of 9th August 1836, p. 413.

cultivated a larger area of ground than that prepared by the cattle ranchers, and he would have farmed it fairly intensively. However, as very little is known about these farmers it is clearly a topic on which a great deal of research is still needed.

Some Boers were townsmen. They laid out three administrative centres: Pietermaritzburg, Congella and Weenen, of which only the first, the capital of the Republic, grew to any size. By 1844 it was a neat town with about 150 houses.<sup>92</sup> It was a place where not only the officials and those providing services lived, but also certain skilled specialists who needed to utilise natural resources. Like any Iron Age or rural Boer community, the townfolk drew on their surroundings for water, fuel, meat and building materials. Because of the concentration of people, the impact made by the Boers of the town in satisfying these demands was far greater than that made in the rural areas. In addition the skilled workers needed particular materials: tile-makers needed clay and plenty of fuel; wagon and furniture-makers needed good timber; and masons needed workable stone. These different demands had to be supplied by the environment in the vicinity of the town.

It is possible that a few members of Boer society hunted on a full-time basis for trade articles. We know very little about the activities of such people in Natal except that some Boers had the reputation of being great elephant hunters,<sup>93</sup> and certainly the Republic exported hides and ivory, although we cannot be sure that these products were not bartered from the Africans. It seems possible that these people would have been fairly nomadic, tracking game through the length and breadth of the republic, then returning to town only to replenish supplies and sell the articles they had accumulated. They may well have been the more lawless members of society who preferred to live on its frontiers, well away from any form of control. Their form of livelihood would obviously have had a deleterious effect on the particular species of game hunted.

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<sup>92</sup> De Natalier, July 1844; J. Laband and R. Haswell (eds.), Pietermaritzburg 1838-1988. A New Portrait of an African City (Pietermaritzburg, 1988), p. 27.

<sup>93</sup> A. Delegorgue, Travels in Southern Africa, vol. 1, originally published as Voyage dans L'Afrique Australe... (Paris, 1847) translated by F. Webb (Pietermaritzburg, 1990), p. 268.



In terms of their technology,<sup>94</sup> a Boer farmer had an array of tools to use, in addition to fire. He had efficient saws and axes with which to clear away bush and trees. Richer Boers would have had strong spades, ploughs and harrows with which they could turn the soil to a considerable depth in preparation for cultivation. They probably also had the knowledge to build irrigation ditches and dams to ensure a good water supply for their crops. Boer men were also better equipped than the Iron Age hunters for they had guns. They were therefore in a position to kill many head of game in a short while, if they so wished. It is unlikely that even the metalworkers of Iron Age society had special tools for mining the iron ore, whereas skilled Boer specialists had a selection of cutting tools of superior quality: hand-axes, adzes and saws of different kinds, including the 'kraansaag' that was taller than a man. With these they had no difficulty in cutting and working stone and timber. The Boers also had efficient means of transporting goods in bulk. On land they used sleds or wagons. The fact that a sawyer could transport timber in a special 'houtwa', for example, must have increased the exploitation of big timber considerably. By sea, they could transport large quantities of goods on ships, which could have encouraged them to export trade articles.

A final aspect of Boer society that needs to be studied here is the Boers' demand for labour. In their society a family was likely to need additional hired labour. Homes wanted domestic labour, farmers had to have help with their agriculture and stock-keeping and skilled artisans in the towns required labour. Although some of the Boers had brought coloured servants with them, this source seems to have been insufficient. The Boers therefore turned to the growing black population to supply their labour needs. As the records of this period of Natal's history are very incomplete, it is impossible to know to what extent the Boers were able to obtain labour. It seems that they considered themselves to be in a labour crisis, for very few Africans were prepared to hire

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<sup>94</sup> For information on Boer technology see G.H. van Rooyen, Kultuurskatte uit die Voortrekker Tydperk (Bloemfontein, 1938), pp. 125, 187-214; see also exhibits in the Voortrekker Museum in Pietermaritzburg of an adze, saws, plough and firearms. The inventory of goods owned by the farmer Dirk van Rooyen, 1842, included two saws, three axes, a plough, six sickles, three picks, as well as bullets and gunpowder C.S.O. 8, part 1 pp. 81-8.

themselves out as labour.<sup>95</sup>

During the years of the Republic, the Boers witnessed an enormous influx, for several reasons, of black people to within its borders. From an estimated black population of 1 000 in 1836 it increased to between 13-14 000 by 1842.<sup>96</sup> In 1839, for example, when Mpande fled Zululand, he persuaded many others to cross the Thukela with him.<sup>97</sup> While some of these refugees were his loyal adherents, others planned to reoccupy their ancestral homes near the coast, while still others simply wished to escape from Dingane. Once Dingane was defeated in 1840, refugees from north of the Thukela no longer had to fear his reprisals. It was also clear by then that the Raad was unable to implement any of its schemes to limit the size and distribution of the Republic's black population.

Many of the Africans settled on land already claimed by Boer farmers.<sup>98</sup> This arose partly because the Boer claims were so vast, but also because both groups of people needed the same resources for their livestock: water, the sweetveld of the valleys, and the grazing of the open grasslands. Faced with this conflict over resources, the Africans appear to have had few options. They could remain on the farms and pay rent, or they could sit tight and resist demands for rent or removal, or they could occupy land that was not coveted by the Boers. If they chose the latter, it meant that they were forced into some of the very worst areas of Natal, retreating to 'the very broken tracts, almost fastnesses'.<sup>99</sup> The places avoided by the Boers, and therefore available to the Africans were the following: any rugged areas, such as those near the Drakensberg; the deep Thukela valley; the land to the south of the Mkhomazi River; and the land to the south

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<sup>95</sup> For discussion on this topic see H. Slater, 'The changing pattern of economic relationships in rural Natal, 1838-1914' in Marks and Atmore (eds.), Economy and Society in Pre-Industrialized South Africa, pp. 157-61.

<sup>96</sup> Proceedings and report of the Commission on the past and present state of the Kafirs ... their future government ... to secure the peace and welfare of the district ... (Pietermaritzburg, 1853) pp. 6, 31.

<sup>97</sup> J. Laband, Rope of Sand (Johannesburg, 1995) pp. 112-3.

<sup>98</sup> Slater, 'The changing pattern of economic relationships', p. 151.

<sup>99</sup> Bird, 'Natal: 1846-1851', p. 8.

and north-west of the bay. The Africans were therefore widely distributed over the landscape, but were still clustered within regions. Exactly how they lived in these areas is a major subject that requires much research. Some of them appear to have led an almost fugitive type of existence in out-of-the-way places, for fear of interference from the Boers.<sup>100</sup> Many probably carried on living as before, clearing bush, planting crops, grazing livestock, and hunting animals. If some of the areas were bad to start with, it seems inevitable that they would have deteriorated if subjected to overgrazing and bad burning practices.

Even within the framework of life as sketched out above, there was still scope for clashes between black and white farmers. The need to practise transhumance could lead to conflict where black farmers grazed cattle on white farms, as could the differentiated system of government that was instituted for the Africans. Those living on farms came under the control of the individual farmers, while those living on unclaimed land were under their own chiefs, as well as the veld cornets of the Republic.

During the years of the Republic, there were three expeditions of British soldiers to Port Natal. The first expedition encamped there from December 1838 to December 1839, then a second one arrived in May 1842, with reinforcements landing in June 1842. Their presence effectively ended the rule of the Republic in June 1842, but for the next few years the Volksraad continued to function while Britain went through the protracted formalities of annexing the territory. Natal became a separate district of the Cape with an effective administration beginning only in December 1845.

As is evident from the above description, Boer society was somewhat different from any that had inhabited Natal before. Theoretically, it was one political unit, under the control of the Volksraad. It was a society that believed in private land tenure, was very heterogeneous in its occupations and lifestyle, and wanted access to labour, some of which would assist the Boers in their particular exploitation of the natural resources. Its technology was far more sophisticated than any used in Natal before. This society placed

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<sup>100</sup> Webb and Wright (eds.), The James Stuart Archive, vol. 1, evidence of Dinya kaZokozwayo, p. 113.

certain new demands on the environment which will now be discussed in relation to the landform and mineral deposits, the flora, and the fauna.

#### 4.i Effects of human activity on the landform and mineral resources

Whereas the hunter-traders had made no impression on the landform of Natal, the Boers did effect a few changes to it during the period of the Republic. They modified the natural flow of several rivers and streams through their small irrigation schemes. At Weenen and Pietermaritzburg, for instance, they led water into the towns through furrows, while several farmers and gardeners built furrows for crop irrigation.<sup>101</sup> They altered the landform in a few places through limited quarrying and mining activities. Near the towns they quarried small quantities of stone for buildings. At Pietermaritzburg, Ohrtmann's shale quarry to the east of the town provided stone for housing,<sup>102</sup> while at Durban stone for the customs house on the Point came from the Bluff.<sup>103</sup>

They also investigated the vast coal beds of Northern Natal<sup>104</sup>, but did not exploit them for several reasons including the lack of a market, the distance of the beds from the capital, and the lack of transport and capital; they did, however, work a coal mine on the farm of P. Ferreira in the Karkloof area.<sup>105</sup> It is possible that the wagonload of coal sold in Pietermaritzburg in 1842 came from this mine.<sup>106</sup>

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<sup>101</sup> E. Smit, The Diary of Erasmus Smit, edited by H.F. Schoon (Cape Town, 1972), p. 124.

<sup>102</sup> A.F. Hattersley, A Camera on Old Natal (Pietermaritzburg, 1960), p. 13.

<sup>103</sup> N.A.D. Bird Papers, Reminiscences of P. Hogg.

<sup>104</sup> F. Krauss, Travel Journal (Cape Town, 1973) pp. 67, 74-6; Notule van die Natalse Volksraad (met bylae), 1838-1845, South African Archival Records, Natal No 1, (Cape Town 1953), p. 26.

<sup>105</sup> Killie Campbell Library, C. Barter, diary, entry for 22 November 1852; Notule van die Natalse Volksraad, p. 22.

<sup>106</sup> J. Bird, The Annals of Natal 1495-1845, (Pietermaritzburg, 1888), vol. 11, Capt. T.C. Smith to Sir George Napier, 20 August 1842, p. 79.

There were a few other minerals that Boers sought which had not been needed by the Iron Age farmers. The Boers wanted salt, for example.<sup>107</sup> They needed it as a food, and, commercially, Boer hunters required it for preserving hides for export. As they were unaware of any natural salt pans, a few Boers considered manufacturing salt in 1840,<sup>108</sup> but nothing came of this plan. In 1842 the Raad gave William Wilson the right to manufacture salt at Congella for three years.<sup>109</sup> It also gave two other individuals the right to prospect generally;<sup>110</sup> there is no further record of their activity. Through a certain clause of Law 12 of 1841 the Raad laid claim to any gold and silver deposits,<sup>111</sup> unless they were on private property, but no such deposits were found.

#### 4.ii *Effects of human activity on the flora*

The impact of the Boers on the flora of Natal appears, at first glance, very similar to that made by the Iron Age farmers. Both societies destroyed indigenous bush for fuel, felled timber as a raw material for building and making utensils, and used the veld for grazing stock. However, on closer examination, differences emerge as to how they went about these activities.

In summary, the years of the Republic saw the following changes in the Natal flora. First, the indigenous bush and forests around the two main towns had been cut into to provide fuel and timber. As Pietermaritzburg had the larger population, as well as the commercial enterprise of the Pistorius family who made tiles for roofing in the early 1840s,<sup>112</sup> the need for fuel was greater than at Durban. As a result of this the bush around the capital seems to have been heavily exploited: the fact that Pistorius had to

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<sup>107</sup> Notule van die Natalse Volksraad p. 133.

<sup>108</sup> *Ibid.*, p. 34.

<sup>109</sup> *Ibid.*, p. 133.

<sup>110</sup> *Ibid.*, p. 22.

<sup>111</sup> *Ibid.*, p. 374.

<sup>112</sup> N.A.D. Bird Papers, Reminiscences of C.W. Pistorius.

advertise for fuel in 1844 suggests that local fuel supplies were indeed becoming short.<sup>113</sup>

Secondly, the demand for timber in the towns was sufficient to provide a living for several sawyers, who felled trees selectively from the nearby forests. At Durban, for instance, in the early 1840s the Hoggs felled timber for housing, furniture and wagons<sup>114</sup> while a few Boer families provided building timber from the Karkloof forests for the people of Pietermaritzburg.<sup>115</sup> Near the town, C. Ohrtmann felled timber for sale from the farm 'Johannes Daal'.<sup>116</sup> This selective exploitation would have temporarily affected the composition of the forests until the remaining trees seeded themselves. It is interesting to note that the consumptive powers of even the relatively small Boer society were considerable, for the Raad showed concern over a potential shortage of timber. It declared some protective measures, such as the resolution that no *mthombothi* wood could be cut in the vicinity of Port Natal, or green wood cut near Pietermaritzburg.<sup>117</sup> We do not know if these resolutions were ever implemented, however.

Thirdly, it is possible that some emigrant farmers adversely affected the veld through overgrazing and unseasonable burning on their farms. As Boer society believed in individual land ownership, farmers were able to use and burn their land as they liked. We know that the Raad discussed the issue of grass-burning but was unable to reach a conclusion on this subject.<sup>118</sup>

Fourthly, the Boers brought certain plant species into Natal, thereby adding to the flora. Boer farmers and gardeners brought 'grain and seed for sowing, as well as young fruit

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<sup>113</sup> De Natalier, 13 September 1844.

<sup>114</sup> N.A.D. Reminiscences of P. Hogg.

<sup>115</sup> G. Fownes, 'Chips from a Karkloof forest', Natal Almanac, Directory and Yearly Register, 1892 (Pietermaritzburg, 1891), p. 173.

<sup>116</sup> A.F. Hattersley, Portrait of a City (Pietermaritzburg, 1951), p. 12.

<sup>117</sup> Notule van die Natalse Volksraad, pp. 13, 160.

<sup>118</sup> *Ibid.*, p. 93.

trees' in their wagons.<sup>119</sup> These plants were then grown throughout Natal. Some farmers must have had enormous orchards, judging from the information given in the advertisements for particular farms in 1844.<sup>120</sup> In Pietermaritzburg, for example, Carl Pistorius owned a small nursery of fruit trees, with pears, apples, peaches, plums, and loquats.<sup>121</sup> Even years later the site of a former Boer homestead could be identified through the nearby fruit tree.<sup>122</sup>

#### 4.iii Effect of human activity on the fauna

The Boers killed animals for the same reasons as had the hunter-traders and Iron Age farmers: to provide food for themselves and trade articles. There was also occasions when some of them killed for sport, enjoying the social function that hunting provided of bonding the males of the society.<sup>123</sup> These activities were limited to a certain extent by popular resolutions passed by the Raad.

The Boers killed a variety of animals for food as they had no alternative sources. Because the number of people involved was in the thousands, and they were fairly widespread throughout Natal, the impact of this activity on the fauna must have been considerable. The range of animals preyed on for this purpose included fish, bird, antelope, buffalo and hippopotamus. The destruction of each of these species will now be discussed in turn.

Hippopotamus were particularly heavily exploited by the Boers, who regarded hippopotamus bacon (zee-koe-spek) as a great delicacy. According to Delegorgue, Boer

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<sup>119</sup> N.A.D. Bird Papers, Bird's Notes on the History of Natal, p. 26.

<sup>120</sup> De Natalier, 19 April 1844; 27 September 1844.

<sup>121</sup> N.A.D. Bird Papers, Reminiscences of C.W. Pistorius.

<sup>122</sup> N.A.D. Bird Papers, Reminiscences of J.E. Fannin.

<sup>123</sup> Delegorgue, Travels, vol. 1, p. 158.

hunters went hippopotamus shooting at least once a year to obtain bacon.<sup>124</sup> The result of this was that the number of hippopotamus diminished rapidly between 1837 and 1843. Their disappearance from two localities, the bay at Port Natal and the Thukela, was noted. Boers at the bay in 1838 were able to go hippopotamus hunting, yet by 1839 it seems that the animals were no longer to be found there, for the naturalist Krauss commented then that hippopotamus had 'once' lived in the bay.<sup>125</sup> Adulphe Delegorgue, a French naturalist who lived in Natal from 1839 until 1844, considered that by 1844 the hippopotamus population was one tenth of what it had been in 1839. He substantiated his claim by quoting the size of hippopotamus bags along the Thukela over the years.<sup>126</sup>

Buffalo also provided food. The Boers' popular shooting grounds were in the Noodsberg, and in the Karkloof and coastal forests.<sup>127</sup> Again the only evidence regarding the scale of destruction wrought by the Boers comes from the writing of Delegorgue. It is very indirect, but it indicates that prodigious numbers of buffalo could have been killed for food.<sup>128</sup>

As buck meat was a dietary favourite of the Boers, they shot several species of buck for food: oribi, impala, eland, waterbuck, duiker, and reedbuck, among others.<sup>129</sup> In the few records of the period there is evidence concerning the impact of hunting on one species only, the red or Natal duiker. According to Delegorgue, this was the most common buck in Natal;<sup>130</sup> he himself shot numbers for food. During his stay in Natal, between 1839 and 1844, he noticed a decrease in their numbers:

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<sup>124</sup> Ibid., p. 158.

<sup>125</sup> Krauss, Travel Journal, p. 60.

<sup>126</sup> Delegorgue, Travels, vol. 1, p. 156.

<sup>127</sup> Krauss, Travel Journal, pp. 62,63; Smit, Diary, p. 165; N.A.D. Bird Papers, F.M. Wolhuter to C. Bird, pp. 174, 177, 178.

<sup>128</sup> Delegorgue, Travels vol. 1, p. 241.

<sup>129</sup> Smit, Diary, pp. 73, 78; Delegorgue, Travels vol. 1, pp. 67, 78, 241.

<sup>130</sup> Ibid., p. 130.



'These *rooye-booken*, which are a good deal hunted, have become quite rare over a period of four years. When I first arrived, I observed ten or fifteen in the area between Berea and Congella, a distance of two miles, but by the time I left, there were only one or two; sometimes I saw none at all.'<sup>131</sup>

This evidence suggests that in an area where the human population was concentrated, the destructive impact of hunting on the size and variety of the antelope population during this period could have been considerable.

The white community at the bay also fed off the local bird-life. Delegorgue recorded that he killed doves, cormorants, blacksmith plovers and hadedas near Durban as food for himself and others.<sup>132</sup> He found that hadedas, which were numerous, made a delicious curry! Other birds killed for the table were snipe, partridge and guinea fowl.<sup>133</sup> Again, such limited destruction would have made no difference to the bird-life.

Fish from the bay formed an important potential source of protein. Certainly the British garrison camp at Durban in 1838 was plentifully supplied with fish,<sup>134</sup> and there were a few fishermen among the Boers too, for some had come from the sea-board of the Cape Colony.<sup>135</sup> As the maritime fish resources were vast, such limited exploitation affected neither the number nor the variety of the fish in the bay. It is therefore not surprising that the Raad did not find it necessary to restrict fishing in order to protect the resource.

Buffalo, hippopotamus and elephant provided trade articles for Boer hunters who wished to earn a living from trading hides and ivory. These products were then shipped to the Cape. The size of this trade seems to have been very small. In 1840, for example, the value of the ivory exported was only £586 and 5s,<sup>136</sup> and in 1841 the quantity of trade in

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<sup>131</sup> Ibid., p. 131.

<sup>132</sup> Ibid., pp. 57, 58, 66.

<sup>133</sup> Krauss, Travel Journal, p. 64.

<sup>134</sup> Bird, Annals, vol. 1, Major Charters to Sir George Napier, 12 December 1838, p. 432.

<sup>135</sup> Natal Mercury, 8 February 1884, Reminiscences of G.C. Cato.

<sup>136</sup> G.H. 28/17, enclosure to Dispatch no. 63, 29 June 1841.

ivory and hides was 'trifling'.<sup>137</sup> There is no clear explanation for this, given that the demand for ivory was probably constant. We know that there were skilled elephant hunters among the Boers,<sup>138</sup> and they could also barter ivory from Africans who had obtained it from hunter-gatherer groups.<sup>139</sup> Probably the very real difficulties concerning trade lay with the poor communications with the Cape Colony for the Boers were dependent on ships calling intermittently at the bay.

While Delegorgue has given us an indication of the effect of the hunters on the hippopotamus numbers, there is no information concerning their impact on the size of buffalo and elephant populations. During 1838 and 1839, while the Boers were in their laagers, they would not have been able to hunt as intensively as they might have liked; they would have been killing buffalo for food, and probably leaving the elephant alone. Certainly in 1839 elephant were frequently seen in the vicinity of the bay.<sup>140</sup> In the early 1840s there does not seem to have been a reduction in the size of the elephant population inland, for one man was able to shoot seventeen elephant in a month in 1842 in the Karkloof forest.<sup>141</sup> It would appear then that by 1843 there were still numbers of elephant in Natal, although they now kept well clear of white homesteads.<sup>142</sup>

There are few records for this period of people in Natal hunting only for pleasure. However, the fact that there are some, concerning both Boers and British, suggest that this activity was perhaps more common than the documents indicate, although the Boers' main purpose seems to have been to get meat. One of the occasions on record when

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<sup>137</sup> Theal, The Republic of Natal, p. 24.

<sup>138</sup> H. Cloete, Five Lectures on the Emigration of Dutch Farmers (first published Cape Town, 1856, repr. Pretoria, 1970), p. 89.

<sup>139</sup> C.deB Webb and J.B. Wright (eds.), The James Stuart Archive, vol. 2, (Pietermaritzburg, 1979), evidence of Mabonsa kaSidhlayi, p. 34; Hedges, 'Trade and politics', p. 56.

<sup>140</sup> Krauss, Travel Journal, p. 62, 66; Delegorgue, Travels, vol. 1, p. 51.

<sup>141</sup> N.A.D. Bird Papers, Reminiscences of J.E. Methley.

<sup>142</sup> Delegorgue, Travels, vol. 1, pp. 268, 269.

Boers hunted for pleasure concerned them 'amusing' themselves shooting hippopotamus on the bay.<sup>143</sup> As for the British force at the bay, some of the men attached to the camp had the leisure-time to chase porpoises on the bay, hunt buffalo and elephant north of the Mngeni,<sup>144</sup> and accompany Delegorgue on hunts.<sup>145</sup> Obviously this activity would result in the destruction of some animals and it would also have frightened others, causing them to move away from the white settlements.

Between 1840 and the end of 1841 the Raad passed several resolutions that limited the hunting activities of the Boers. One of these appears to have been passed for purely political reasons. Although the Boers claimed all the territory to the Black Mfolozi, they were aware that there were many Zulu living between the Thukela and the Black Mfolozi. As the intrusion of white hunting parties could have led to conflict with the Zulu, the Raad drew up a stringent set of regulations to control whites hunting north of the Thukela.<sup>146</sup> Among the few landdrost records of the Republic that have survived is a letter from the landdrost of Congella, ordering the return of three men who had crossed the Thukela without permission to hunt.<sup>147</sup> It would appear therefore that attempts were made to enforce this regulation.

Two other resolutions passed reflect the values of Boer society regarding game. It is clear from even the very few records that we have that attitudes towards hunting differed among the Boers. Some people believed in shooting only what they required when they needed to shoot for food, while others shot far more than was necessary.<sup>148</sup> In 1841 the Raad was informed that the 'reckless destruction' of wild animals was common. It responded to the report by resolving that if wild animals were killed, they had to be 'used

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<sup>143</sup> Bird, Annals, vol. 1, Narrative of W.J. Pistorius, p. 232.

<sup>144</sup> N.A.D. Shepstone Papers, vol. 1, Journal entries for 2, 9 and 23 January 1839.

<sup>145</sup> Delegorgue, Travels, vol. 1, p. 59.

<sup>146</sup> Notule van die Natalse Volksraad, p. 97.

<sup>147</sup> N.A.D. Voortrekker Museum Acc. 109, no. 28, J.S. Maritz to Douglas, Parkins and King, 28 October 1841.

<sup>148</sup> Smit, Diary, p. 73.

properly', else the person concerned was liable to a fine.<sup>149</sup> Unfortunately, the Raad did not define what it meant by 'used properly', but the resolution still indicates that the Boer leaders who sat on the Raad were anxious to conserve game. Within Boer society game was important as a means of subsistence and therefore it was a resource that could not be wasted.

Another resolution aimed to prevent the destruction of game on private property, without the permission of the owner.<sup>150</sup> This was obviously to protect the interests of those with private property. Indirectly, the resolution would have worked to conserve game, although it was not ostensibly directed towards conservation but the protection of private property rights.

#### 4.iv *Summary*

The arrival of 4 000 or so Boers in 1837 proved a turning-point in the environmental history of Natal. Even in the short period of the Republic, this society established a certain pattern of exploitation of resources which differed somewhat from that of the Iron Age farmers or the hunter-traders. In addition, the number of Africans living within the Republic increased dramatically during these few years, and so a discussion of their activities is also necessary.

The Iron Age farmers had spread out over much of Natal practising shifting agriculture and grazing their stock on the natural vegetation. They cleared some of the forests, allowing invasion of secondary vegetation. Some of them produced commodities for trade, by smelting metal or hunting ivory for a very spasmodic trade.

By contrast, the hunter-traders had concentrated at the bay to facilitate their trading with ships that called there. They made very little impact on the surrounding flora but all of them hunted three specific animal species; buffalo, hippopotamus and elephant for trade

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<sup>149</sup> Notule van die Natalse Volksraad, p. 84.

<sup>150</sup> *Ibid.*, p. 111.

articles. As this exploitation was heavy, it resulted in a decrease in the population of all three species in Natal.

The emigrant farmers, like the Iron Age farmers, spread throughout Natal, while townsmen congregated at the three Boer villages of Pietermaritzburg, Congella and Weenen. Each Boer homestead required fuel, timber and meat, and so the particular distribution of Boer homes meant that the environment in the vicinity of the villages was used particularly heavily to provide these resources. Boer farmers moved on to land which in many cases had not been inhabited for over a decade, and proceeded to use it in much the same way as the Iron Age farmers had, except that their system of private land ownership meant that they were settled farmers, instead of practising shifting agriculture, and it also meant that they could use their land as intensively as they wanted. Boer hunters shot buffalo, hippopotamus and elephant in order to trade skins and ivory, but others in the community drew on a far wider range of resources from which to make a living. They killed buck as a source of meat, felled timber and worked wood to sell, quarried stone and mined coal. Again, where these activities centred on a village, the impact they made on the environment was more noticeable because the scale of activity was increased. Their investigations during this period had indicated that the coal reserves of Natal were enormous. Even though the Boers did not utilize them extensively, they had shown that there was potential for mineral exploitation in Natal.

The lack of research into this period concerning the Africans living within the Republic makes it impossible to give an accurate picture of their impact on the environment. We know that some of them avoided contact with the whites by living in areas that were unattractive to the Boers. Others lived on Boer farms, and some on unclaimed land; these people would have been able to live in much the same way as the Iron Age farmers had. They would have hunted wild animals for meat, grazed their stock on the veld and burnt it for green grazing, and they would have cut down indigenous bush to use as fuel; they would also have cleared areas for the planting of their crops.

A tentative assessment of the state of the Natal environment by 1844 would therefore read as follows. The farming of the black and white stock-keepers must have affected

the composition of the grasslands, through the selective grazing of the animals and the periodic burning by the farmers. As the farmers were scattered throughout Natal, these changes would have been widespread. Much indigenous vegetation had been cut down for fuel, particularly around Pietermaritzburg. White sawyers had also cut into the forests near to the villages, choosing to fell only certain trees and thereby altering the composition of the remaining forest. The Boers had altered the landform, however slightly, through their quarries, dams and irrigation ditches. While all families killed buck and probably birds for meat, white hunters had destroyed buffalo, hippopotamus and elephant in particular. Animals had also moved away from settled areas. As a result, there must have been considerably less game of all kinds in Natal in 1844, and the populations of those animals which had been selectively exploited must have been considerably diminished. However, all the species of game that had been found in Natal in 1837 could still be seen there in 1844.

## CHAPTER 2

### THE SETTLER SOCIETY

#### 1 The material culture of the Natal settlers between 1845 and 1870

According to Worster, the environmental historian proceeds at three levels.<sup>1</sup> The first is to understand the environment as functioning in past times, as Chapter 1 of this thesis attempts to do for the Natal environment by 1845. The second and third levels are concerned with how the material and mental culture of the society interact with the environment.<sup>2</sup> While the key issue to the material culture of any society is the mode of production, it is influenced by the socio-economic, political and technological factors. The term material culture is therefore interpreted very broadly in this thesis as understanding how the society worked. The first part of the chapter will discuss the functioning of the society in Natal between 1845 and 1870, while the second part of the chapter focuses on the perceptions and attitudes of the settler society in relation to the environment.

During the 1840s and early 1850s about 5 000 British settlers immigrated to Natal. Much has been written of their social and economic significance,<sup>3</sup> but it is also possible to view their arrival as crucial in the environmental history of the Colony. Before this influx Natal had only a few white settlers who, through lack of labour and capital in particular, had made only a minimal impact on the environment. With the arrival of thousands of settlers from the most highly industrialised nation of that time, a new era began. The entrepreneurs, skilled workmen, labourers, traders and farmers amongst them had different though complementary roles to play: some continued types of environmental exploitation already existing in Natal, while others set in

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<sup>1</sup> Worster, The Ends of the Earth, p. 293.

<sup>2</sup> *Ibid.*, p. 298.

<sup>3</sup> See A.F. Hattersley, The British Settlement of Natal: A Study in Imperial Migration (Cambridge, 1950), *passim*.

motion new forces which interacted and led to considerable modification of the environment in some areas.

The new settlers immigrated to an area that had undergone several constitutional changes in the preceding years.<sup>4</sup> From being the Boer Republic of Natalia, the land to the south of the Thukela had become a separate district of the Cape Colony on 31 May 1844. For the white colonists there was no representation until Natal became a separate colony on 15 July 1856. The Legislative Council then consisted of sixteen members of whom four were officials and twelve were elected. Although the franchise was qualified it did enable wealthier white settlers to gain a say in the governing of their affairs which included environmental issues. Restrictive legislation prevented Africans, on the other hand, from qualifying as voters or Legislative Council members. These political arrangements remained operative throughout the period of study.

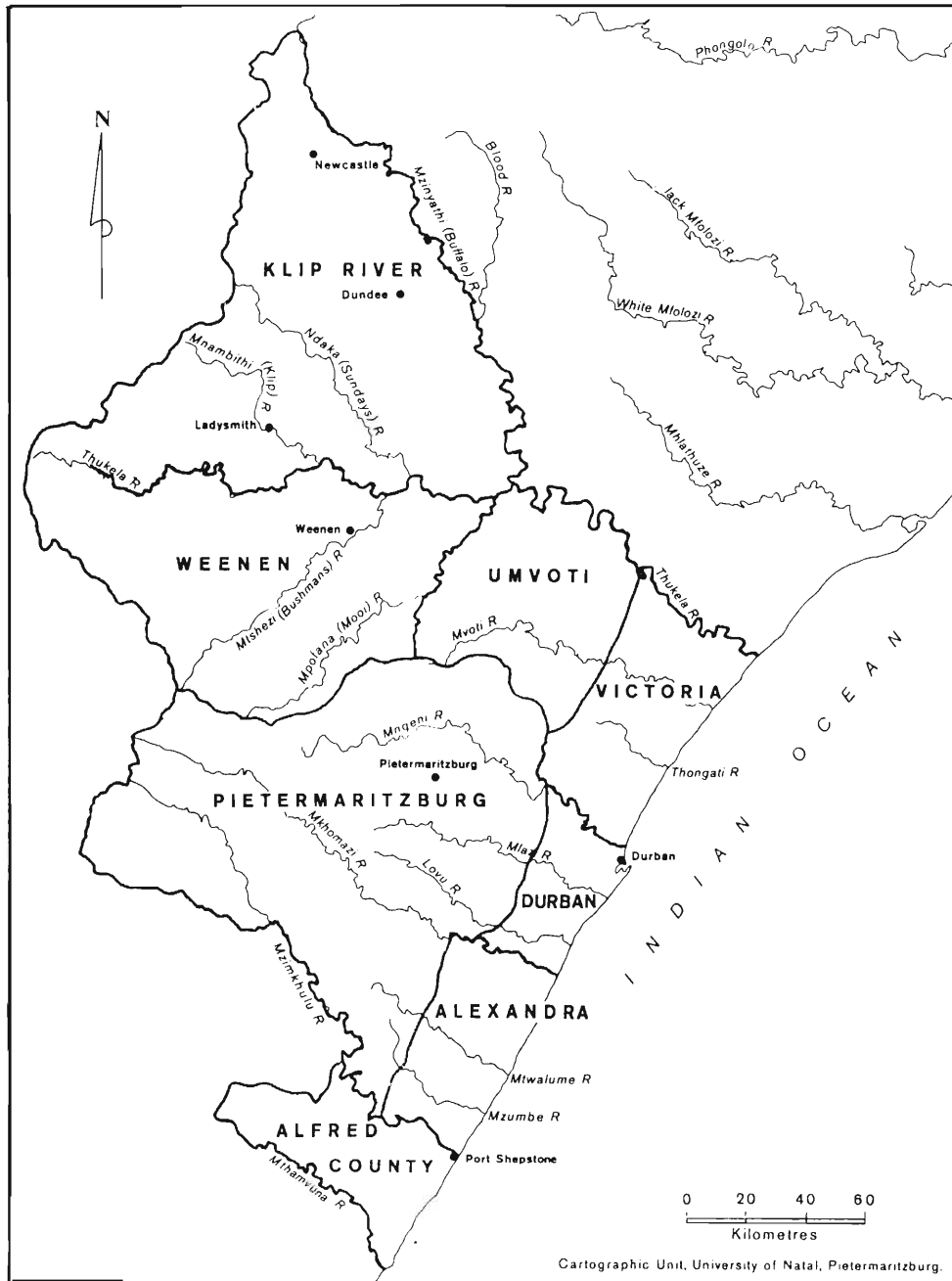
The Colony of Natal was smaller than the Republic of Natalia had been and its boundaries were the line along the Thukela and Mzinyathi (Buffalo) rivers in the north; the coastline in the east; the Drakensberg mountains to the west; and the Mzimkhulu River in the south. These remained unchanged for the first twenty years of British rule. To facilitate administration the Colony was initially divided into six divisions reflecting the pattern of white settlement at the time. These divisions were Durban, Pietermaritzburg, Umvoti, Impafane (Weenen), Upper Tugela and Umzinyati (north of Weenen). As white settlement began to extend along the south coast and south of Pietermaritzburg, new divisions were created. The annexation of Nomansland in the south, in 1866, shifted the southern boundary to the Mthamvuna River. Natal then consisted of eight counties: Klip River and Weenen in the north; Umvoti and Pietermaritzburg in the midlands; Victoria, Durban and Alexandra along the coast; with the newly annexed land forming Alfred County stretching from the coast to some distance inland. The position of these counties can be seen on Map 2.

When the British administration began, the white population of Natal numbered only a

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<sup>4</sup> For all the information in this paragraph see E.H. Brookes and C. de B. Webb, A History of Natal (Pietermaritzburg, 1965, 2nd impression, 1967), p. 75.





Map 2 The Counties of Natal

few thousand. The failure of the Republic of Natalia had caused an exodus of Boer farmers which left the midlands of Natal deserted by whites, while most of the remaining Boer families lived in Pietermaritzburg.<sup>5</sup> By the mid-1840s the white population was therefore predominantly urban and British, where traders and officials far outnumbered farmers. This imbalance was redressed somewhat when Jonas Bergtheil's small immigration scheme settled German people on farmland west of Durban in 1848, and about 100 Boer families returned to Natal and settled in the upper reaches of the Thukela.<sup>6</sup> By 1849 the white population numbered close to 4 000, with about half inhabiting the two main towns of Pietermaritzburg and Durban and the rest spread thinly across the Colony.<sup>7</sup>

Extensive emigration from Britain in the late 1840s because of a nation-wide economic crisis profoundly affected the size and distribution of the white population of Natal. Between 1849 and 1851 just on 5 000 settlers arrived in Natal, many attached to Joseph Byrne's immigration scheme. This meant that the white population more than doubled. Speculators, aiming to settle white farmers on small rural plots, bought up blocks of vacant land in the midlands. However, the inadequate size of the allotments, their distance from any market, as well as the settlers' own lack of capital and farming expertise, made failure of the scheme inevitable. The settlers either gravitated towards the two main centres or they helped populate the small villages. By the mid-1850s the pattern of white settlement was laid down and it remained fairly fixed throughout the period under study. By 1870 there were just under 18 000 whites of whom about 3 000 were Boers.<sup>8</sup> Well over half the population lived in Durban and Pietermaritzburg. The coastal counties were occupied by the British, with the north coast being more densely populated than the south. In the midlands, both Boers and British lived in and around

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<sup>5</sup> *Ibid.*, p. 79; Bird, 'Natal: 1846-1851', pp. 7-8; Natal Witness, 3 March 1848.

<sup>6</sup> Natal Witness, 23 June, 30 June 1848.

<sup>7</sup> J.C. Christopher, Natal, Cape of Good Hope (London, 1850), pp. 85-7; Methley, The New Colony of Port Natal, pp. 15-6.

<sup>8</sup> J. Robinson (ed.), Notes on Natal: An Old Colonist's Book for New Settlers (Durban, 1872, reprinted Pretoria, 1967), pp. xxiii, xxiv.

Pietermaritzburg, while Boers predominated in Umvoti, Weenen and Klip River Counties. The part of Natal where hardly a single white person was to be found was in the area south of Richmond and in the stretch to the west, between Richmond and the Drakensberg.

The vast majority of the inhabitants of Natal were Africans who, after the turbulence of the early Boer period, were able to settle into a more stable way of life again. Their numbers grew rapidly. For reasons beyond the scope of this study the administration demarcated a number of locations for African settlement only.<sup>9</sup> Beginning in 1846, locations and mission reserves were set aside so that by 1864 there were 42 locations, covering about 810 000 hectares (2 000 000 acres) and 21 mission reserves, of about 70 875 hectares (175 000 acres).<sup>10</sup> All the location land was alienated to a body entitled the Natal Native Trust in 1864. This body, consisting of the Executive Council of Natal, was to hold the land in trust for the Africans. There were certainly attractions to living on a location for one paid no rent and gave no labour service to a landlord;<sup>11</sup> the disadvantage, however, was that much of the reserve land was poor and broken, so that over the years it became less and less productive as it became overpopulated and overstocked. It is not surprising then that about two-thirds of the Black population lived outside the reserves.<sup>12</sup> They lived on land rented from the whites (either resident farmers or absentee landlords), in return for cash or labour dues. They could also live on unalienated Crown land. What follows is a very brief discussion of those aspects of African society that are relevant to this thesis.

The judicial and administrative control of the Africans was achieved through a hierarchy

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<sup>9</sup> For discussion on this see N. Etherington 'The "Shepstone System" in the Colony of Natal and beyond the borders', in A. Duminy and B. Guest (eds.) Natal and Zululand from Earliest Times to 1910 (Pietermaritzburg, 1989), pp. 170-89.

<sup>10</sup> P. Maylam, A History of the African People of South Africa: From the Early Iron Age to the 70s (Cape Town, 1986), p. 84.

<sup>11</sup> H. Slater, 'The changing pattern of economic relationships', p. 160.

<sup>12</sup> C. Bundy, The Rise and Fall of the South African Peasantry (London, 1979, 2nd ed. 1988), p. 170.

of several levels of personnel.<sup>13</sup> The Supreme Chief was the Lieutenant-Governor, assisted by Theophilus Shepstone, the Secretary for Native Affairs. Below them were the resident magistrates, followed by chiefs, and finally the *indunas* and headmen. They implemented a dual legal system introduced in 1849, where customary law applied to cases involving Africans in the reserves, and in civil cases between Africans outside the reserves, but criminal cases involving Africans outside the reserves were tried by Roman-Dutch law.<sup>14</sup> This system undermined and reduced the power of the chiefs.

The colonial administration also exhibited a degree of economic control over all Africans through the introduction of the hut tax, in 1849. This was an annual tax of 7s. per hut. As Etherington has pointed out, the revenue from this tax and from the customs duties on particular imported goods, favoured by the Africans, practically paid for the whole government of Natal.<sup>15</sup> For those Africans living far from towns, the only possible way to pay the hut tax was to produce an agricultural surplus or to enter the labour market on a temporary basis. The creation of a domestic market in the villages and towns in the 1850s and 1860s enabled those Africans living near them to have different economic choices open to them. Enterprising Africans could hawk foodstuffs as well as suitable commodities from natural resources such as thatching, fuel and grass mats, so establishing themselves as peri-urban peasants in the process.<sup>16</sup> This enabled them to avoid entering the labour market.

To date, little research has been done on the effects on African social life of producing for the colonial market before 1870. What is available relates to those Africans living on white-owned farms in the Natal midlands.<sup>17</sup> From this, only two main points will be

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<sup>13</sup> Etherington, 'The "Shepstone System" in the Colony of Natal', p. 172.

<sup>14</sup> Maylam, A History of the African People, p. 84.

<sup>15</sup> Etherington 'The "Shepstone System" in the Colony of Natal', p. 174.

<sup>16</sup> C. Bundy, 'The emergence and decline of a South African peasantry', in African Affairs, vol. 71, no. 285 (October, 1972), p. 375. Evidence of this for the Natal Africans will be given in Chapters 3, 4, 5 and 6.

<sup>17</sup> J. Lambert, 'Africans on white-owned farms in the mist belt of Natal, c1850-1906', in Journal of Natal and Zulu History, X, (1987), pp. 32-50.

discussed. First, it appears that those lineages that produced successfully for the market invested their earnings in increasing their cattle herds. The presence of more grazers on the midlands grasslands would have intensified the modification of the grasslands, a process discussed in Chapter 1. Secondly, the power of the chief was reduced because access to white-owned land by commoners enabled young men to accumulate cattle and marry at a young age, beyond the control of the chief. As the chief traditionally controlled access to the environment, it is possible that without this control the environment could deteriorate rapidly through poor grazing management, overstocking, harmful burning practices, and over-hunting.

Direct settler interaction with the environment hinged on the type and extent of their production. During the 1840s it was limited to hunting, pastoralism and subsistence farming with the chief exports being butter, ivory and hides (ox and buffalo). The scale of this production was very small. In 1848, for example, the value of these three products constituted two-thirds of the total export value of just over £10 000.<sup>18</sup> The records do not differentiate between products from Natal and those coming from the Overberg trade or from north of the Thukela, so one cannot say with certainty what quantity of these products emanated from Natal itself.

From the 1850s onwards the prosperity of Natal increased. This encouraged the establishment of the first bank, the Natal Bank, in 1854; it offered credit facilities to whites only, providing an important source of capital for farmers in particular. The spectrum of production in the Colony broadened because almost overnight a domestic market was created through the influx of settlers from the settlement schemes. People wanted to buy wagons, furniture, construction materials and foodstuffs. Some settlers, like the Africans, could utilize natural resources to provide the required commodities. They quarried stone, burnt lime, felled and sawed timber, fished, hunted, burnt bricks and cut reeds for thatching.

On the external market, butter, hides and ivory continued to be exported during the

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<sup>18</sup> Natal Witness, 2 February 1849 has a table of exports for the years 1846-1848.

1850s and 1860s. However, it is important to note that settler hunting had so decimated the game in Natal by the 1860s, that buffalo and elephant were seldom seen.<sup>19</sup> Most of the hides exported were therefore ox-hides, while all ivory exported after 1863 must have come from beyond Natal's borders as no record of elephant in Natal has been found for the years after 1863. Agricultural products instead came to overshadow the value of ivory and hides. As Robin has argued, Imperial Britain expected its colonies to produce primary products<sup>20</sup> and the Natal settlers experimented with several cash crops in the 1850s in their search for a staple crop. They tried crops such as indigo, arrow-root, cotton and sugar. Of these, sugar proved the most successful and, from humble origins in 1855, the sugar industry grew at an unprecedented pace, establishing sugar as a major export by the early 1860s.<sup>21</sup> The 1850s also saw the beginning of the woolled sheep industry in the midlands. After the epidemic of lung sickness in 1855-6, the industry expanded rapidly so that wool soon ranked with sugar as a major export. In 1864, for instance, of the Colony's total export value of £220 267, the value of sugar was £94 370, and that of wool £64 336.<sup>22</sup> By then the pattern of land use was clearly laid down, with sugar farmers settled along the coast, pastoralists and woolled sheep farmers in the midlands and the far north, with much of these areas in the hands of speculators who, as absentee landlords, earned income from Africans renting farmland, an arrangement termed 'Kaffir farming' by the whites concerned.<sup>23</sup>

Unfortunately for Natal's development, the years 1865-9 were ones of severe economic depression. Some of the reasons for this lay beyond the control of the Colony: a banking crisis in Britain that led to a reduction of trade and credit throughout the Empire; war

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<sup>19</sup> See discussions on fauna in Chapters 3, 4, 5 and 6 to verify this.

<sup>20</sup> L. Robin, 'Ecology: a science of empire?', in T. Griffiths and L. Robin (eds.), Ecology and Empire (Keele University Press, 1997), p. 67.

<sup>21</sup> P. Harries, 'Plantations, passes and proletarians: labour and the colonial state in the nineteenth century Natal', in Journal of South African Studies, vol. 13, no. 3, (April, 1987), p. 377.

<sup>22</sup> J. Parle, 'The impact of the depression upon Pietermaritzburg during the 1860s' (unpublished M.A. thesis, University of Natal, 1988), Table 3b, p. 210.

<sup>23</sup> Slater, 'The changing pattern of economic relationships', p. 160.

between the Sotho and the Free State which stopped the Overberg trade; and a general depression in southern Africa as a whole. In Natal itself, factors such as the colony's continual importation of capital because of the value of exports falling below that of the imports, as well as the general over-extension of credit, all contributed to the crash. Sugar exports fell as some of the farmers went into debt; ivory exports dropped dramatically because of the cessation of the Overberg trade as well as through the limits the colonial government placed on the activities of hunter-traders in Zululand.<sup>24</sup> The only significant export that continued to increase through the depression years was wool. However, by 1870, there were several signs that the depression was over. The ending of the Free State war and the discovery of diamonds in the interior of southern Africa revived the Overberg trade and increased the significance of Durban as a port.

The extent to which the settlers could modify the environment depended partly on the supply of labour available to them. Generally, throughout the period of study, the supply was insufficient to meet the demand, although the amount of labour the white settlers came to control was far greater than that of any group before them in Natal.

Craftsmen such as stone-masons, sawyers, thatchers, lime-burners and brick-makers all required labourers to assist them produce commodities from natural resources.<sup>25</sup> Other than the sawyers of the midlands and the far north, the craftsmen were centred in the towns. It seems reasonable to presume that they drew on the nearest location for their labour supply. That the availability and cost of the labour was critical to the producers is shown, for example, by a notice in 1859 from the brick-makers of Durban, where one of the reasons given for the rise in the price of bricks was the 'scarcity of Kafir labour, and exorbitant wages now demanded by them'.<sup>26</sup>

The farmers' need for labour was considerable. Stock farmers needed labourers to herd

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<sup>24</sup> G.H. 1215, no. 23, J. Bisset to E. Cardwell, 5 October 1865; S.N.A. 1/6/3, R 565, J. Warmsley to T. Shepstone, 15 October 1866.

<sup>25</sup> Evidence of these activities will be given in Chapters 3, 4, 5 and 6.

<sup>26</sup> Natal Mercury, 10 June 1859.

stock and assist in the preparation of butter and wool for the market, while agriculturalists needed the ground to be cleared and prepared for planting, and for crops to be tended and harvested. The rapid expansion of cash crop farming by white settlers in the coastal regions exacerbated the existing labour shortage. Large sugar estates, for instance, required several hundred labourers each, with different levels of skill for the various activities involved. The sugar farmers felt that if the Natal Africans could not be relied upon for dependable labour, then it would be necessary to look elsewhere. As the sugar farmers of Mauritius had benefited from indentured Indian labour, the Natal sugar farmers considered importing labour, either from southern Africa or from beyond the continent.<sup>27</sup> The two most successful schemes were those concerning the importation of Tsonga labourers and indentured Indian labourers. The government proved cooperative in these ventures, being determined no doubt to shift the cash crop farmers' attention away from their desire to break up the reserves. As the importation of the indentured labour was by far the more significant of the two schemes, it will be discussed first.

The Natal Government's application for Indian labour to the Court of Directors of the East India Company was accepted in 1858.<sup>28</sup> As a result about 6 000 labourers, of whom two-thirds were male, arrived from India between 1860 and 1866. The terms of their contract obliged them to be indentured for five years. During this period they worked on the sugar farms in the coastal counties, proving crucial to the development of the sugar industry. Indians who had fulfilled their contracts became 'free' Indians, who could choose either to stay in Natal or return to India. Many chose to stay, knowing that although they were now free men they had no political power at all. By the late 1860s just under 5 000 lived at the coast, while a few lived in Pietermaritzburg. The options open to them were limited, for they lacked capital and also suffered from white competition. A number of them remained labourers; some entered the service sector in Durban as cooks, laundrymen or tailors; while others became producers, either as market

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<sup>27</sup> C. Ballard, 'Migrant labour in Natal 1860-1879: with special reference to Zululand and the Delagoa Bay hinterland', in *Journal of Natal and Zulu History*, vol. 1, (1978), p.28.

<sup>28</sup> *Ibid.*, p. 29.



gardeners or as fishermen.<sup>29</sup>

The other scheme of imported labour concerned Tsongas, living to the north of the Zulu kingdom in a tributary relationship. In the late 1850s sugar farmers from Isipingo showed an interest in importing Tsonga labourers. They applied to the government requesting permission for this and their efforts met with success.<sup>30</sup> While no formal scheme existed for importing Tsonga labour, it is clear from the comments of resident magistrates that young Tsonga men were entering the Colony and working for settlers.<sup>31</sup> The obvious success of the imported Indian labour in the early 1860s may have contributed towards making the government more willing to consider an official scheme for importing Tsonga labour. Accordingly, in July 1863, Shepstone negotiated with John Dunn, influential advisor to Cetshwayo, the heir apparent to the Zulu throne. He wanted Dunn to supervise the importing of the labourers and to see to their safe passage through Zululand. On their arrival in Natal they would enter a three year labour contract, in accordance with the terms of Law No. 13 of 1859, which regulated the importation of Tsonga labourers and their families. The various terms of the importation scheme made it unattractive to the Tsonga, forcing the government to admit the failure of the scheme in January 1864.<sup>32</sup> During the depression the agitation for Tsonga labour died down since many planters were deeply in debt. However, by 1869 the economy began recovering and the export figures for sugar rose markedly, making sugar the biggest export. Tsonga labourers consequently began trickling back into the Colony under their own auspices, but even this flow was insufficient to meet the demand of the cash crop farmer.<sup>33</sup>

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<sup>29</sup> M. Wilson and L.M. Thompson (eds.), The Oxford History of South Africa, vol. 1, (Oxford, 1969), p. 389.

<sup>30</sup> Harries, 'Plantations, passes and proletarians', p. 377; S.N.A. 1/1/8, no. 6, Sugar Planters to Lt. Gov. Scott, 17 February 1858, no. 45, H.I. Knox to T. Shepstone, 13 May 1858, no. 69, E. Foxon to T. Shepstone, 7 June 1858.

<sup>31</sup> S.N.A. 1/3/8, no. 12, B. Blaine to T. Shepstone, 29 November 1859.

<sup>32</sup> Government Notice No. 12, 1864.

<sup>33</sup> Ballard, 'Migrant labour', p. 32; Harries, 'Plantations, passes and proletarians', p. 380.

In the meantime, what of the labour needs of the upcountry farmers? This sector of the white farming community had to rely on African labour rather than any imported Indian labour. While these farmers do not seem to have been able to obtain sufficient labour for themselves they were able to influence the decisions made in the legislature, where they held eight of the twelve elected seats, regarding labour.

The government itself needed labour for the building of the colonial public works so necessary for economic progress. It obtained labour through the *isibhalo* system of forced labour, where the Secretary for Native Affairs requested a chief to supply labour for a particular task in his area: the labourers were then coerced by the chief.<sup>34</sup> Other than during the years 1854-8 the *isibhalo* system operated throughout the period discussed here, although it was disliked by chiefs and commoners alike for it undermined the power of the chief, interrupted the Africans' way of life, and the wages paid were low.<sup>35</sup>

The final aspect of the labour issue that needs to be mentioned here is that of legislation on labour relations.<sup>36</sup> Such legislation was required by the settlers for their own advantage, so that labour could be controlled and regularized. Unlike the people they sought to control, they were able to agitate for the necessary legislation and their representatives could shape it in the legislature. Despite numerous complaints in the early years, from the settlers about the lack of legislation controlling labour relations, no statute was formulated by the Cape legislature. Once the legislative power passed to the Natal Legislative Council, there were still delays, for which Riekert suggests several reasons, before the Master and Servants Ordinance was gazetted on 26 March 1850. It was practically identical to the Cape Masters and Servants Ordinance of 1841, controlling

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<sup>34</sup> D. Welsh, The Roots of Segregation: Native Policy in Natal, 1845-1910 (Cape Town, 1971), p. 122-3; I. Machin, 'The levying of forced African labour and military service by the colonial state of Natal' (unpublished Ph.D. thesis, University of Natal, 1995), pp. 63-161.

<sup>35</sup> *Ibid.*, p. 123; J. Wright and A. Manson, The Hlubi Chiefdom in Zululand -Natal: a History (Ladysmith, 1983), p. 41.

<sup>36</sup> On this issue see J.G. Riekert, 'The Natal Master and Servants Law' (unpublished M.L. thesis, University of Natal, Pietermaritzburg, 1983), pp. vii, 56-115.

all aspects of contracts of employment. In 1852 it was amended slightly concerning contracts of service entered into abroad, but this amendment was repealed in 1857 when further provisions were made in the same area, making such contracts valid for much longer periods of from five to seven years. This legislation then remained in use for the rest of the period under study. Indentured Indians were, however, governed by different legislation until they had been in the Colony for five years, when they came under the Ordinance.<sup>37</sup>

The opening up of the market in Natal increased the potential for exploiting the environment. To do this the settlers needed technology. As Britain was highly industrialised, the technology was easily obtained from Britain provided the settlers had enough money to pay for it. With the appropriate technology the settlers could intensify every form of production. A farmer could purchase modern ploughs, harrows, threshing and reaping machines, as well as simpler pieces of equipment like picks and scythes.<sup>38</sup> With this equipment he was able to cultivate far more land than would have been possible without it. Sugar farmers could import all the mill machinery they needed, such as crushers, balers, wetzels and centrifugals; by the 1860s their mills were steam-driven.<sup>39</sup> This technology played a large part in the success of the sugar industry. The numerous cutting instruments used by all who worked with timber must have increased the rate at which timber was felled and worked. The ironmongery imported for sawyers alone included pitsaws, crosscut saws, steel bits, files, and all equipment for sawmills most of which were steam-driven by 1864.<sup>40</sup> Hunting and fishing required guns and fishing nets which were easily obtained. Types of earth-moving equipment such as picks, shovels and wheelbarrows could be imported in large numbers, and even a crane was brought

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<sup>37</sup> *Ibid.*, p. 92, footnote 30.

<sup>38</sup> *Natal Witness*, 27 July 1849; 26 October 1849; 26 July 1850; 31 August 1855; 25 May 1860.

<sup>39</sup> Hattersley. *The British Settlement*, pp. 237-9.

<sup>40</sup> *Natal Witness*, 27 June 1856; P. Richardson, 'The Natal sugar industry, 1845-1905: an interpretative essay', in B. Guest and J.M. Sellers (eds.), *Enterprise and Exploitation in a Victorian Colony* (Pietermaritzburg, 1985), p. 186.

in to facilitate stone-moving at the Umgeni quarry in Durban in 1867.<sup>41</sup> Concerning transport, the settlers could make wagons and small ships; they could even import railway tracks and trains. With all this variety of technology open to them, the British had far more opportunity to exploit the environment than had the Boers before them.

## **2. The settlers' perception and value of the natural environment of Natal**

Having established the outline of the material mode of culture of the white settlers, it is now necessary to investigate how this culture perceived and valued nature. This is the third of Worster's levels of enquiry. As Natal was a British colony, the attitude of the British government towards the natural environment of the Colony must be investigated. Robin has stressed that in the economics of empire, the identification and use of natural resources was significant.<sup>42</sup> Giving support to this argument is the explicit instruction included in the Colonial Regulations which reads as follows:

'Besides making these regular Returns, Governors are particularly enjoined to keep the Secretary of State punctually informed of the progress of geographical and scientific exploration in their colonies and in particular to transmit reports of journeys of discovery, and investigations of the natural history and capabilities of particular districts, with such maps and surveys as may be required for elucidation...'<sup>43</sup>

Clearly, the colonial government needed to know as much as possible about the environment in order to extract the maximum from it, an attitude strongly linked with the idea of progress. The settlers too demonstrated this utilitarian attitude, for in a society geared towards commodity production they aimed to produce for profit on the market.

The first step was for the settlers to get to know the Natal environment. While the settler handbooks contained some information on the subject, much of it was inaccurate. In Pietermaritzburg, the formation of the Natal Society in 1851 stemmed from the desire

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<sup>41</sup> Natal Mercury, 23 July 1867.

<sup>42</sup> Robin, 'Ecology: a science of empire?', p. 64.

<sup>43</sup> S.G.O. 111/1/9 p. 98, letter from Colonial Office to P.C. Sutherland, Surveyor-General, 12 August 1857.

to correct erroneous statements concerning the environment. The Natal Society aimed to collect and publish accurate information on, amongst other things, the physical resources of the Colony.<sup>44</sup>

For most settlers, however, knowledge was best gained at first hand. Farmers had to learn about the potential of the soil on their farms, the rainfall pattern of the area, as well as what crop and stock diseases were prevalent. They had to experiment with crops to see which thrived in a specific climate. To encourage farmers and to facilitate the exchange of information between them, the settlers established agricultural societies, such as those based in Pietermaritzburg and Greytown.<sup>45</sup> These societies held shows to exhibit livestock, produce and agricultural implements. Through the form of an annual grant to these societies the government showed its support of their aims.

There were several other ways in which the government played a role, either directly in collecting and disseminating information about the environment, or by providing some degree of support to those who did. The first of these to be discussed here concerns the geology of Natal. The importance attached to the land and discovering its 'capabilities' was reflected in the fact that the first official professional appointment made in the new colony was that of Surveyor-General. William Stanger, the first incumbent, was faced with the daunting task of producing a topographic survey of the whole of Natal and a 'piecemeal cadastral survey' so that farms could be demarcated and occupied as soon as possible.<sup>46</sup> He and his successors attempted to provide more accurate maps and descriptions of the Colony than those done in the pre-colonial period; these maps were then made available for the public to buy.<sup>47</sup> Although the government knew of the

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<sup>44</sup> For discussion on this point see S. Brooks, 'The Mausoleum challenged: An exploration of the democratic museum idea and its application in colonial Natal, with particular reference to the Natal Museum, Pietermaritzburg (1851-1904)' (unpublished Honours thesis, Pietermaritzburg, 1986), pp 29-31.

<sup>45</sup> These societies will be discussed in more detail in Chapter 5.

<sup>46</sup> C. Merrett, 'William Stanger and the early years of cartography in Natal, 1845-1854', *Natalia* 9, (1979), p. 30.

<sup>47</sup> *Natal Mercury*, 18 July 1855; *Natal Witness*, 15 March 1861.

existence of the coal beds, it was not until 1866 that the Surveyor-General, P.C. Sutherland, made a report on them. This too was published for all to read.<sup>48</sup> The following year he published a description of the geology of Natal<sup>49</sup> which, through his discovery of the rocks of glacial origin in the Mngeni quarry, completely changed the interpretation of Natal's geographical past.<sup>50</sup>

Included in the geological investigations was the search for useful minerals. Although a few private individuals in the 1850s prospected for copper and gold,<sup>51</sup> the deposits appear to have been either valueless or impractical to mine. It was only in the late 1860s that prospecting activities seem to have intensified. Copper deposits were found in the Ntsizwa mountain, south of Alfred County, in 1866. Although these lay beyond the borders of the Colony, the government directed the Surveyor-General and Mr T. Shepstone to investigate them and send a sample to England.<sup>52</sup> At about the same time, marble beds in Alfred County were discovered and samples extracted.<sup>53</sup> Small gold deposits, too, were located on the south coast in 1868<sup>54</sup> and at the junction of the Thukela and Mzinyathi rivers in 1869.<sup>55</sup> So keen was the government to find payable

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<sup>48</sup> P.C. Sutherland, 'The Surveyor-General's report on the Natal coal fields', Natal Almanac and Yearly Register, 1869, (Pietermaritzburg, 1868 ) pp. 97-100.

<sup>49</sup> P.C. Sutherland, 'The geology of Natal', Ibid., 1870, (Pietermaritzburg, 1869), pp. 61-76.

<sup>50</sup> L. King, The Natal Monocline: explaining the Origin and Scenery of Natal, South Africa (Durban, 1972), p. 93.

<sup>51</sup> N.A.D. Bird Papers, information on D. Sparks; A.F. Hattersley, Portrait of a Colony (Cambridge, 1940), p. 67.

<sup>52</sup> Natal Mercury, 24 April 1867; D. Child (ed.), Portrait of a Pioneer (Johannesburg, 1980), p. 59; S.N.A. 1/1/17, no. 19, R 569, A. Evans to T. Shepstone, 4 April 1867; no. 20, R 158, J. Vacy Lyle to T. Shepstone, 6 April 1867; Natal Witness, 31 July 1868; S.N.A. 1.8.3, Private letterbook: T. Shepstone, 1852-1874, T. Shepstone to Mr W. Crowther, 9 July 1868; Selected Documents Presented to the Legislative Council, 1857-1874 (PMBurg, 1901), vol. 3, Second Session, Fourth Council, document no. 31, 1867, pp. 1-6.

<sup>53</sup> The marble beds will be discussed in Chapter 4.

<sup>54</sup> S.N.A. 1/1/18 no. 65, R 1285, G. Parsons to T. Shepstone, 24 October 1868.

<sup>55</sup> S.N.A. 1/1/19, p. 155, R 1424, J. Shepstone to T. Shepstone, 13 March 1869.

gold deposits that it passed a law in 1869 that offered a reward for such a discovery.<sup>56</sup>

In Europe, in the meantime, new attitudes towards knowledge were emerging which were to impinge on the people of Natal. The first half of the nineteenth century had seen a great move towards the democratization of cultural life<sup>57</sup> and the development of the sciences, free from religious constraints. In the botanical world, it was an era of great plant explorers and collectors, with plant specimens flooding into the newly established herbaria of Europe from America, Africa, Australia and the Far East.<sup>58</sup> Botanical interest in Britain by the mid-1840s centred on Kew Gardens, under the directorship of Sir William Hooker, who encouraged settlers in the British colonies to send him specimens.<sup>59</sup>

In Natal, the settlers' interest in plants first centred on economic botany, for the possibility of growing cash crops stimulated the formation of the Natal Agricultural and Horticultural Society in Durban in 1848. Government interest in the botanical enterprises of the Colony was shown by the fact that it made the necessary land grants at Durban for the Botanical Gardens, where experiments could be carried out on plants of economic value<sup>60</sup>. It provided an annual financial grant to assist with the running costs, and the Lieutenant-Governor was the patron of the society.

The curator of the gardens imported fruits, ornamental shrubs, medicinal-yielding plants, timber-tree seeds (such as Australian gums and wattles) and commercial plants like China Grass, used in substitution of worsted. He made them available to the public to purchase, along with ginger, pineapples, arrow-root, pepper, cotton, tea, sugar-cane and

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<sup>56</sup> Government Gazette, pp. 459-60, Law No. 16, 1869.

<sup>57</sup> For discussion on this point see Brooks, 'The Mausoleum challenged', p. 15.

<sup>58</sup> A.W. Bayer, 'Discovering the Natal Flora', Natalia 4 (1974), p. 42.

<sup>59</sup> D. McCracken and P. McCracken, Natal, the Garden Colony: Victorian Natal and the Royal Botanic Gardens, Kew (Sandton: Frandsen Publishers, 1990), pp. xvii-xix.

<sup>60</sup> G. Russell, The History of Old Durban, and the Reminiscences of an Emigrant of 1850 (Durban, 1899, repr. Durban, 1971), p. 131.

many others. Thanks partly to these practical efforts, the 'Pumpkins and Mealies' period of the early 1850s passed, and by 1857 small farmers in the vicinity of Durban were able to sell fruit and vegetables to the town folk.<sup>61</sup>

The practical value of the gardens was therefore considerable, provided they were run by skilled men. In this Natal was fortunate, for the early curators were men who had trained at Kew and maintained strong links with it.<sup>62</sup> Indeed, it has even been argued that this contact and the exchange of plants that resulted from it was part of a 'global plot masterminded by scientific controllers at Kew Gardens!'<sup>63</sup> Mark McKen, an immigrant in 1850, was curator until 1854, and he believed that the role of the gardens was to disseminate plants and experiment with the best methods of cultivation.<sup>64</sup> He was succeeded by Robert Plant, also a Kew-trained horticulturalist, who went on collecting trips through Natal and Zululand to gather indigenous plants. Both men exchanged these with other botanical institutions, such as those at Kew, Mauritius, Hong Kong, Melbourne, Bangalore, Cape Town and Uitenhage. As from January 1855 the curator kept a meteorological record which was published in the Natal Mercury.<sup>65</sup> There were also several colonists of the period who were skilled amateur botanists including the Surveyor-General (Dr. P.C. Sutherland), John Sanderson and Katharine Saunders, to name but a few.<sup>66</sup>

To the British settlers, botanical gardens and parks had yet another advantage. As

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<sup>61</sup>Ibid., p. 293.

<sup>62</sup> For discussion on this see McCracken and McCracken, Natal, the Garden Colony p. 3.

<sup>63</sup> J.M. MacKenzie, 'Empire and the ecological apocalypse: the historiography of the imperial environment' in Griffiths and Robin (eds.) Ecology and Empire, p. 219.

<sup>64</sup> Natal Times and Durban Mercantile and Agricultural Gazette, 13 August 1852.

<sup>65</sup> S.G.O. 111/9/4, p. 51: report on R 855, 1961; Natal Mercury, 1855 and 1856 passim.

<sup>66</sup> McCracken and McCracken, Natal, the Garden Colony pp. 11-19.



Bjorvig has pointed out,<sup>67</sup> such places were viewed in Victorian Britain as 'lungs' to purify the air. It was therefore in accordance with this value that parks were laid out in both of the main towns.

The pursuit of information about the environment included within its ambit the collection of zoological specimens. In pre-colonial days Natal had attracted naturalists such as Johan Wahlberg, Andrew Smith, Ferdinand Krauss, and Adulphe Delegorgue, who had made collections of the flora and fauna of Natal.<sup>68</sup> Some of these specimens were sent to Western Europe, where there was a burgeoning interest in museums and zoological gardens. Throughout the period under discussion the demand for specimens for both institutions and private individuals continued unabated for, in Victorian society, the cabinet of natural 'curiosities' was regarded as a sign of an educated person.<sup>69</sup> Scientists within the Colony, such as Robert Plant, Dr Stanger, and his successor Dr Sutherland, all sent off cases of Natal shells, insects, cycads, mounted fish, and succulents to collectors or to the British Museum.<sup>70</sup> Other settlers set up commercial agencies for receiving and forwarding wild animals for zoos; their advertisements for lion, leopard, wildebeest, hartebeest, eland, buffalo, jackal, ostriches, eagles, herons, crocodiles, and any other wild animals appeared in the local papers.<sup>71</sup> People did respond to these advertisements, for there are records of the sale of young lion, eland, and even a wagon load of 'living monsters'.<sup>72</sup> More trading of living wild animals was occasioned by the

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<sup>67</sup> A.C. Bjorvig, 'Durban 1824-1910: the formation of a settler elite and its role in the development of a colonial city' (unpublished Ph.D. thesis, University of Natal, 1994), p. 174.

<sup>68</sup> *Ibid.*, p. 2.

<sup>69</sup> Robin, 'Ecology: a science of empire?', p. 64; Brooks, 'The Mausoleum challenged', pp. 18-9.

<sup>70</sup> R. Plant, 'Diary', entries for Dec. 1851, 15 April 1852, 6 February 1853, 1 July 1853; Natal Mercury, 10 January 1865.

<sup>71</sup> Natal Witness, 26 February 1847, 22 June 1855, 2 February 1865, 18 December 1868, 30 November 1869, 21 January 1870; Natal Mercury, 21 August 1866.

<sup>72</sup> Natal Witness, 17 December 1847; G.H. Mason, Zululand. A Mission Tour in South Africa (London, 1862), p. 113; Natal Mercury, 10 January 1855; E. Mohr, To the Victoria Falls of the Zambezie (London, 1876, repr. Bulawayo, 1973), p. 57.

development of Acclimatisation Societies in several parts of the world in the 1860s.<sup>73</sup> Even Natal had one of these societies which aimed to introduce different plants and animals into the local environment, but its activities were on a very small scale.<sup>74</sup>

It was only late in the 1860s that a few settlers took stock of the man-wrought changes in the environment that they had caused in less than thirty years. The most obvious of these were the shooting out of the big game and the clearing of forests. This awareness led to the formation of the Natural History Association of Natal in Durban in March 1868.<sup>75</sup> The aim of this association was to contribute to the advancement of science by organising and recording observations of nature, and by preserving natural objects. At the inaugural meeting there were private collections of insects, birds, fossils, minerals and shells on display, a fact that caused the Natal Mercury to devote a leader column to argue for the establishment of a museum.<sup>76</sup> That the Lieutenant-Governor was the president of the association again shows the interest of the administration in the accumulation of knowledge of the environment.

Turning now to the measures made by the government concerning the use of resources, the first topic to be discussed is that of timber. Even the small group of whites in Natal in the 1840s proved powerful enough to exploit this resource to the extent that the administration deemed it necessary to protect it. The settlers' felling of timber near Durban caused concern to the administration as it was a vital resource in the Colony, used for housing, furniture and wagons. Unfortunately, there was comparatively little timber to be found in the immediate vicinity of the main towns. The government embarked on a policy of timber protection with Government Notice No. 56 of 1849

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<sup>73</sup> For the history of the Acclimatisation Societies throughout the world, see C. Lever, They Dined on Eland (London, 1992); W. K. Hancock, Discovering Monaro; A Study of Man's Impact on His Environment (Cambridge, 1972), pp. 115-6.

<sup>74</sup> C.S.O. 2303, no. 941, D. Erskine to Secretary of the Acclimatization Society, Victoria, 16 April 1863; G.H. 1214, no. 65, J. Scott to E. Cardwell, 14 October 1864.

<sup>75</sup> J.S., 'The study of natural history, and the association for its promotion', Natal Almanac and Yearly Register, 1869, (Pietermaritzburg, 1868), pp. 60-6.

<sup>76</sup> Natal Mercury, 17 March 1868.

which forbade tree felling on government ground, in or near Durban, without the permission of the Resident Magistrate. He would point out where wood could be cut. As Durban was the only port in the Colony, it is possible that the restriction aimed to preserve timber for shipbuilding, as had been the case with the reservation of the forests at Plettenburg Bay in 1811.<sup>77</sup> As the impecunious Natal government was in no position to appoint an officer to enforce the restriction, it was probably ineffective.

The potential for the destruction of forests increased as the white population dispersed in the early 1850s. Some of the newly-arrived settlers, such as the Few brothers, established themselves as sawyers in the midlands where they could fell the indigenous trees of the mistbelt forests,<sup>78</sup> unhampered by any restrictions. The sawyers set up a thriving trade in timber, not only to supply the local market but also to participate in the overberg trade, for Natal timber tripled in price when sold in Bloemfontein<sup>79</sup>. It might have been this turn of events that led the government to prevent the cutting of timber in any government forest or Crown forest through Government Notices No. 27 of 1852 and No. 19 of 1853, respectively, but again no extra personnel were appointed to enforce the restrictions.

Late in 1853 an extension of the administrative staffing in the Colony suddenly made possible the enforcement of any legislation on timber. Through Ordinance 4 of 1853 the Lieutenant-Governor was empowered to issue proclamations regarding the preservation of timber on Crown land. As he explained to the Secretary of State:

'The object of this Ordinance is the protection of the forests, the necessity of which has long been felt. The obstacle which stood in the way of legislating on this subject at an earlier period, arose principally from the difficulty of providing for the inspection of the forests and the prosecution of persons guilty of felling timber without a licence. This impediment is now to a great extent removed by the appointment of a great number of Magistrates and Field Cornets, on whom the duty of protecting this

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<sup>77</sup> R. Grove, 'Early themes in African conservation: the Cape in the nineteenth century' in D. Anderson and R. Grove (eds.), Conservation in Africa: People, Policies and Practice (Cambridge, 1987), p. 23.

<sup>78</sup> This will be discussed in Chapter 5.

<sup>79</sup> Natal Witness, 3 May 1853.

valuable Crown property will now devolve'.<sup>80</sup>

Ordinance 4 was followed by a proclamation in September 1853 which laid restrictions after 1 October 1853 on persons removing timber from land belonging to the Crown.<sup>81</sup> The main clauses made it illegal for anyone to cut or remove timber from any forest belonging to the Crown, unless the person was in possession of the necessary licence. The licence cost £1 per month per saw, and the field cornet had to point out what timber could be cut. Theoretically, then, the proclamation brought the Crown forests firmly under the government's control. It also gave the Lieutenant-Governor the authority to make legislation regarding timber on Crown Land, district by district. This legislation will be discussed in the appropriate chapters of this thesis.

Within the decade of the proclamation, the sharp price rise for fuel and timber sounded a warning that these resources were becoming scarce. The press commented on the heavy and uncontrolled exploitation of forests in Natal.<sup>82</sup> The limited finances available to the government, however, made the employment of full-time forest conservators impossible. It had to rely on the already overburdened resident magistrates and field cornets implementing the legislation. Given that the locations of Natal were overcrowded and sited on environmentally fragile land, it is not surprising that the Natal Native Trust, noting very serious destruction of forests in two locations in particular in the late 1860s, considered it sufficiently important to employ conservators there. It appointed James Archbell conservator in the Zwartkops location in December 1867,<sup>83</sup> while the Rev. A. Tönnesen became conservator in the Umlazi location in July 1870.<sup>84</sup> Their duties included the keeping of a register of the payments for firewood, according to the tariff fixed by the Trust; preventing the felling of timber for buildings or other purposes; and the reporting of any reckless destruction of timber by the Africans.

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<sup>80</sup> G.H. 1210, no. 56, B.C.C. Pine to Duke of Newcastle, 7 October 1853.

<sup>81</sup> Proclamation of 24 September 1853.

<sup>82</sup> Natal Mercury, 8 December 1864.

<sup>83</sup> S.N.A. 3/4/1, T. Shepstone to J. Archbell, 23 December 1867.

<sup>84</sup> Natal Witness, 29 July 1870.

The question of grass burning, a topic discussed by the Volksraad as early as 1841, had to wait twenty years under the colonial administration to receive attention. Settlers, whether black or white, burnt grass, either to ensure pasturage for their stock or to facilitate hunting.<sup>85</sup> This practice, if abused, could have altered the existing vegetation by retarding the invasion of woody plants into the grassveld and altering the species composition of the plant succession.<sup>86</sup> It was not concern over environmental change, however, that prompted the government to introduce legislation on grass burning. Rather, the government acted to preserve the interests of the white farmer, for it feared that much settler property was destroyed through uncontrolled burning.<sup>87</sup> By Law No. 21 of 1865, any person who wilfully burnt grass on his own property and then let the fire extend beyond his land, was liable to a fine of up to £10; burning grass on public land, a Corporation commonage or property not belonging to him, made him liable for a fine of up to £25. While the Attorney General acknowledged that wagon and transport drivers were often guilty of setting fire to grass near the roads,<sup>88</sup> the fact that Shepstone was told to instruct all magistrates to inform the Africans in their divisions of the legislation and report back to him 'the result of their communication', suggests strongly that the government felt that the Africans were the worst offenders.<sup>89</sup>

While trade was responsible for much of Natal's growing prosperity in the 1850s, it also brought its own problems with it as evidenced by the arrival of the burr weed (Xanthium spinosum) in the Colony.<sup>90</sup> In the opinion of one settler, the burr weed was introduced when a ship laden with pepper was wrecked near the shore in July 1854. He contended

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<sup>85</sup> De Natalier, 14 April 1846; S.G.O. 111/1/8, T. Okes to J. Bird, 15 June 1852.

<sup>86</sup> J.M. Feely, 'Did Iron Age man have a role in the history of Zululand's wilderness landscapes?', South African Journal of Science, 76 (April, 1980), p. 152.

<sup>87</sup> A.G.O. 1/10/1, p. 286, Statement on Law No. 21, 1865, n.d., M.H. Gallwey.

<sup>88</sup> *Ibid.*

<sup>89</sup> S.N.A. 1/1/15, no. 76, D. Erskine to T. Shepstone, 15 December 1865.

<sup>90</sup> For a discussion on the spread of weeds in colonies see A.W. Crosby, 'Ecological Imperialism: the overseas migration of western Europeans as a biological phenomenon' in Worster (ed.), The Ends of the Earth, pp. 113-17.

that the seeds of the weed were washed up on the Durban beach among the peppercorns.<sup>91</sup> Certainly, several other sources agree that the burr weed appeared in Natal at about that time.<sup>92</sup> Within a few years it was distributed from Durban to the Drakensberg and beyond<sup>93</sup> because the spiny seeds stuck easily to the tails of oxen and horses. By early 1861 it had spread as far as British Kaffraria and the Eastern Province of the Cape Colony.<sup>94</sup>

The only interest group that was affected by the weed was that of the sheep farmers: the presence of burrs in the wool lowered its price. With wool fast becoming a staple export, the government could not afford to ignore the request of the Pietermaritzburg Agricultural Society to appoint a commission to enquire into the matter.<sup>95</sup> The commission recommended passing a law encouraging the destruction of the weed. Accordingly, Law No. 20 of 1861, moulded on a bill in the Cape Colony where the weed was also a problem,<sup>96</sup> was duly passed and gazetted. The main clauses of the law stated that occupiers of land on which the weed was found were to be fined up to £5 if they had failed to eradicate the weed within a 30 day warning period, and that field cornets were to see to the burning of the weed where it grew on public roads, Crown Lands or outspan places, as were also all road inspectors. As with the legislation on forests, however, no special officer was appointed to implement it.

Not surprisingly therefore, the law failed to eliminate the weed and within a year a new commission was appointed to enquire into the problem. It found that Law No. 20 of 1861 had been 'wholly inoperative' throughout the Colony, except for the municipality

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<sup>91</sup> N.A.D., Bird Papers, reminiscences of S.W.B. Griffin.

<sup>92</sup> J.S., 'The study of natural history', p. 62; C.S.O. 132, no. 134, R 743, J. Raw to D. Erskine, 24 May 1861.

<sup>93</sup> Selected Documents Presented to the Legislative Council, 1857-1874 (Pietermaritzburg, 1901) vol. 2, Second Session, Third Council, document no. 28, 1862, p. 11.

<sup>94</sup> Natal Mercury, 17 January 1861.

<sup>95</sup> C.S.O. 132, no. 134, R 743, J. Raw to D. Erskine, 24 May 1861.

<sup>96</sup> N.P.P. 238, Select Committee no. 51861, 20 June 1861.

of Pietermaritzburg.<sup>97</sup> Although it urged immediate action on the part of the government, none was forthcoming. In 1867 the Natal Chamber of Commerce's request to the administration to enforce the law resulted in the resident magistrates being circularized to that effect, with 'economical' measures being suggested.<sup>98</sup> As in the case of the forest legislation, the administration could not afford to appoint officers to implement the law until after 1870, when Law No. 38 of 1874 repealed and re-enacted the law of 1861 with more stringent regulations. The new law allowed for the appointment of special inspectors to check on the destruction of the weed for, according to the Attorney-General, the law of 1861 had failed 'because there existed no efficient means of carrying out the law'.<sup>99</sup>

There was no legislation at all in Natal regarding animals of any sort until the mid-1860s. Up until then, people were free to kill whatever and as many animals as they liked. Then, within a short space of time, three laws were passed concerning the killing of animals, namely fish, noxious animals and certain species of game. The fishing law arose from very particular circumstances at the bay of Natal and the clauses of the law pertained to the bay only; it will therefore be discussed in the chapter on the Durban area. The remaining two laws must be studied in the wider context of game usage and destruction by the British.

The British settlers, like the Boers before them, killed animals for a variety of reasons. In the first place, they killed animals for food. In the early years of the Colony, when the settlers were concentrated in the two towns of Durban and Pietermaritzburg, they killed local birds and buck for food. As some of the settlers dispersed into the rural areas in the early 1850s, the destruction of certain species of game for food became more widespread, but once the settlers accumulated their own livestock they ceased to rely on

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<sup>97</sup> Government Gazette, 1862, p. 408, Report of a select committee to consider and report on the operation of the law for the eradication of *Xanthium Spinosum* ...

<sup>98</sup> C.S.O. 266, Colonial Engineer's report on R 219 of 1867, 13 February 1867.

<sup>99</sup> A.G.O. 1/10/4, pp. 397-8, Statement on Law no. 38, 1874, M. Gallwey, 28 December 1874.

game.<sup>100</sup> Secondly, the settlers killed animals for commercial reasons.<sup>101</sup> Much of this hunting was done north of the Thukela and it enabled unemployed settlers with few economic resources the chance to make a living from animal commodities.<sup>102</sup> Such products ceased to be a significant contribution to the economy of Natal from about the mid-1850s. Settlers could also kill specimens for museum collection. This activity continued throughout the period under discussion but always on a very small scale. Similarly, the collection of live animals for zoos and the Acclimatisation Society was a very small, spasmodic business. Also, animals were killed for sport, which will be discussed below.

Settlers' safety and that of their livestock were threatened by animals such as lion and leopard, and by crocodiles at the unbridged river crossings. In the 1840s and 1850s all those animals were found near the main centres.<sup>103</sup> As the settlements grew, the lion and leopard moved further away so that by the mid-1860s it is likely that only the farmers in the midlands were still harried by them. Even so, in 1866 the colonial authorities judged that the damage done by predators to livestock made it necessary to introduce a law making provision for their destruction. Law No. 8 of 1866 was therefore aimed against certain predatory animals which were referred to as being noxious. As Natal was in the grip of a severe depression at the time, it is possible that the authorities were particularly concerned about eliminating animals that preyed on sheep, for wool was a staple export. The preamble to the law certainly reflects concern for the white farmers' losses of livestock through the ravages of wild animals.

The law empowered resident magistrates to pay out rewards to those who could provide

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<sup>100</sup> R. Gordon (ed.), Dear Louisa: History of a Pioneer Family in Natal 1850-1888 (Durban, 1970, repr. 1976), pp. 62, 105, 106, 111, 115, 120, 138; Bird, 'Natal: 1846-1851', p. 11.

<sup>101</sup> For a discussion of a colonist who hunted for his economic survival, see the Introduction by P. Merrett in R.B. Struthers, Hunting Journal 1852-1856 in the Zulu Kingdom and the Tsonga Regions, P.L. Merrett and R. Butcher (eds.), (Pietermaritzburg, 1991), pp. 15-48.

<sup>102</sup> W.C. Humphreys, The Journal of William Clayton Humphreys, introduced by J. Pridmore, (Pietermaritzburg, 1993), p. viii-x.

<sup>103</sup> Natal Witness, 23 June 1846; Natal Independent, 7 August 1851.



proof of destroying animals belonging to the species listed in Schedule A of the law: leopard, hyena, crocodile, jackal and wild cat. The schedule also stipulated the size of the reward, which seems to have depended on how destructive the animal was considered to be; £1 was paid for a leopard, 10s for hyena and crocodile and 1s and 6d for a jackal. The fact that lion were not included indicates that they were probably no longer found in the Colony. The last sighting of lion in the Natal midlands seems to have occurred in October 1859, for a lion was seen then between Mooi River and the Mngeni,<sup>104</sup> although they were still seen in the early 1860s nearer the Drakensberg.<sup>105</sup>

The average number of rewards paid out per month in any county seems to have been about five.<sup>106</sup> In January 1867 the resident magistrate of Alfred County paid out 54 rewards for wild cats.<sup>107</sup> This sudden and very large increase in the number of rewards was probably the stimulus that prompted an amendment to the law. The amendment, of June 1867, stipulated that the only variety of wild cat to be included in the schedule was that known to the Africans as *ihlosi*<sup>108</sup>. This is the rusty-spotted genet.

The law was repealed in September 1868.<sup>109</sup> The reason for this step, according to the Natal Witness, was 'a principle of economy'.<sup>110</sup> As the Colony was in a depression at the time, it is not surprising that the administration ceased to reward people for an activity that they were likely to pursue even without a system of rewards. However, a new factor came to contribute to the destruction of crocodiles in 1868. It became fashionable in England for society ladies to wear shorter skirted dresses in the morning as walking

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<sup>104</sup> Natal Witness, 21 October 1859,

<sup>105</sup> J.S. Dobie, South African Journal, 1862-1866, ed. A.F. Hattersley, (Cape Town, 1945), p. 78.

<sup>106</sup> Natal Mercury, 18 October 1866; Natal Herald, 14 February 1867, 21 March 1867, 16 May 1867, 23 April 1868, 16 July 1868, 13 August 1868, 10 September 1868, 15 October 1868.

<sup>107</sup> Natal Herald, 14 February 1867.

<sup>108</sup> Government Gazette, p. 178, Government Notice No. 59, 12 June 1867.

<sup>109</sup> Government Gazette, p.348, Law No. 12, 1868, gazetted on 22 September 1868.

<sup>110</sup> Natal Witness, 25 September 1868.

dresses, and with this change in hem length, the ladies paid more attention to their boots and shoes.<sup>111</sup> A Durban paper featured an article on this topic that it had copied from an English newspaper. It read as follows:

'Crocodiles are in great demand just now, it having been recently discovered that the skin of these amiable monsters is admirably adapted for ladies' boots, being a peculiarly soft and flexible texture; and furthermore, of a nature that takes high varnish.'<sup>112</sup>

It is highly likely that this new fashion would soon have been followed in the Colony, thereby accelerating the destruction of crocodile in Natal.

In the matter of hunting for sport, the British settlers followed a very different pattern of behaviour from that of the Boers. While few Boers appear to have hunted purely for pleasure during the days of the Republic, it seems fairly clear that among the British, the leisured classes, such as they were, frequently hunted for sport. Much of their hunting took place north of the Thukela where the game was prolific.<sup>113</sup> Discussion of such hunting, however, lies beyond the scope of this thesis which is confined to settler activities within the Colony of Natal. Those who could afford the time to hunt for sport within the Colony, such as senior colonial officials and military officers from the garrison,<sup>114</sup> lived mostly in the capital. These people, accompanied by wealthy local farmers, met for hunts in the vicinity of the town in the early years of colonial rule, when game was still plentiful in the midlands. It could be argued that in Natal, as in other parts of the British Empire, the hunt became ritualized as a symbol of the superiority of a particular class of Europeans: the high-ranking officers of the military and administration together with wealthy farmers, who were the local equivalent of the landed gentry of Britain, formed the ruling class, who then used hunting to bolster their

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<sup>111</sup> C. Willett Cunnington, English Women's Clothing in the Nineteenth Century (London, 1937, repr. London, 1956), pp. 230, 233.

<sup>112</sup> Natal Herald, 2 July 1868.

<sup>113</sup> B. Ellis, 'Game conservation in Zululand, 1824-1947: changing perspectives.' in Natalia, 23/24, (1993/94), p. 29.

<sup>114</sup> Hattersley, The British Settlement, pp. 332-3.

own image of dominance.<sup>115</sup> In this context it is interesting to note that although Africans accompanied the great hunts from Pietermaritzburg, they did so in the subservient role of beaters, not as hunters.<sup>116</sup> The 'rulers', with true Victorian brutality in the hunt, often killed wantonly. The officers from Fort Napier, for example, recorded some bags of staggering proportions.<sup>117</sup>

The settlers' destruction of game was such that by the mid-1860s it had become scarce. This threatened the hunting of the ruling class. It is not surprising then that legislation on game was introduced into the Legislative Council by an elite group of sportsmen, led by the prominent local farmer and member of the Legislative Council, Charles Barter.<sup>118</sup> Their efforts resulted in Natal's first game law, Law No. 10 of 1866. While this was not an original piece of legislation, for it was based on a Bill prepared for British Kaffraria,<sup>119</sup> it was far more sweeping than Government Notice No. 263 of 1858 protecting game in the Cape Colony.<sup>120</sup> The main clauses of the law were concerned with those animals the hunters liked to shoot, which reinforces the argument that the legislation was introduced for the benefit of the hunters.

The Game Law set up open and closed seasons and different schedules of animals. Schedules A and B listed animals that could not be killed during their breeding seasons. Those in Schedule A, which were all birds, were protected between 15 September and 15 April, both dates inclusive; those in Schedule B were protected from 15 August to

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<sup>115</sup> J.M. Mackenzie, 'Chivalry, social Darwinism and ritualized killing: the hunting ethos in Central Africa up to 1914', in Anderson and Grove (eds.), Conservation in Africa, pp. 41-61; For a detailed description of what constituted the gentry in the Colony, see Bjorvig, 'Durban 1824-1910', Chapter 1; See also S.J. Alexander, 'Adulphe Delegorgue - Scientist' in Delegorgue, Travels in Southern Africa, p. xxvi, for a brief discussion of hunting as a sport for gentlemen.

<sup>116</sup> Natal Witness, 19 November 1847.

<sup>117</sup> P.H. Dalbiac, History of the 45th Regiment (London, 1902) pp. 168-9.

<sup>118</sup> Natal Witness, 11 June 1866.

<sup>119</sup> C.S.O. 233, no. 2010, D. Erskine to E. Buchanan, 17 October 1865.

<sup>120</sup> R. Grove, 'Early themes in African conservation: the Cape in the nineteenth century', in Anderson and Grove (eds.), Conservation in Africa, p. 27.

15 November, both dates inclusive. Schedule C included certain buck and birds, which received protection for different reasons. According to the Attorney-General, the secretarybird was included because of its usefulness - it destroyed snakes 'with which the Colony is every where infested'; however, the eland, hartebeest and ostrich were included because of being 'very rare in the Colony' and likely to become 'extinct' unless protected.<sup>121</sup> To shoot animals listed in Schedule C, one needed the permission of the Lieutenant-Governor. It is significant that this proviso was inserted when the Bill was passing through the House, for it was these very people who would be likely to have the ear of the Lieutenant-Governor. It would therefore be they who were able to shoot the animals. The common white man would probably be excluded from this privilege, the black man definitely so. What appeared to be conservationist legislation was therefore used to restrict the hunting of certain animals to the ruling class, a phenomenon observed elsewhere in Africa.<sup>122</sup>

The Schedules of the law were as follows:

Schedule A - the partridge, pheasant, pauw, korhaan, guinea fowl, crane.

Schedule B - the buffalo, quagga, bonte quagga (or zebra), hares and all varieties of the antelope genus, generally termed or known in this colony as - the impala, rietbok, rheeboek, steenbok, oribi, bushbok, bluebok, klipspringer, duiker.

Schedule C - the eland, hartebeest, ostrich, secretary-bird, turkey-buzzard known as the *isingisi*.

Because only common names are used in the schedules it is impossible to be sure which species of bird were protected, but possibly the following were meant: partridge for Natal Francolin; pheasant for the Common Quail; pauw for Stanley's Bustard, korhaan for White-bellied Korhaan; guinea fowl for Helmeted Guineafowl and the Crested Guineafowl; and crane for Crown Crane. The turkey-buzzard is the Ground Hornbill.

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<sup>121</sup> A.G.O. 1/10/1, p.419, Statement on Law No. 10, 1866, H. Cope, 3 September 1866.

<sup>122</sup> Mackenzie, 'Chivalry, Darwinism and ritualized killing', p. 56; S.Trapido, 'Poachers, proletarians and gentry in the early twentieth century Transvaal' (unpublished paper, African Studies Institute, 1984), pp. 1-24.

### 3. Summary

When Natal became a British colony, its resources such as the soil, the grasslands, timber and game had been utilized by humans for over a thousand years, as has been discussed in Chapter 1. By 1845, therefore, the environment had already been modified through human agency. As this thesis will show, the establishment and growth of the Colony until 1870 caused further transformation of the environment. Within the locations, it is possible that several environmental changes were underway, as has already been discussed. Timber resources needed for manufacturing were much diminished in the vicinity of the main towns, while in Northern Natal, where timber was felled for export over the Drakensberg, forests were nearing exhaustion. The success of the cash crop farmers at the coast had led to the clearing of more and more coastal vegetation to allow for cultivation. Inland, where farmers ranched cattle, sheep and goats, and burnt for winter grazing, veld composition changes may well have been in progress. While certain plants had been introduced into Natal purposefully, such as sugar and cotton, one species had been introduced accidentally: the burr weed had established itself firmly, despite efforts to eradicate it. There was far less game in Natal by 1870; it had diminished both in number and variety. Even the fish life in the coastal streams was threatened by the effluent from the sugar mills.

Between 1845 and 1870 settlers laid down a particular pattern of exploitation of the environment. This pattern remained much the same for the whole period, although there were incremental advances in some types of destructive activity. With the discovery of diamonds in 1867, southern Africa entered the world economy and the pace of economic life accelerated sharply in some areas.<sup>123</sup> Natal too was affected by the mineral discoveries and underwent profound socio-economic changes which also altered the scale of exploitation of the environment. The colonial period prior to the mineral discoveries would therefore appear to constitute a separate phase of environmental history in Natal, with 1870 as a suitable cut-off point.

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<sup>123</sup> C.G.W. Schumann, Structural Changes and Business Cycles in South Africa, 1806-1936 (London, 1938), pp. 37-62.

This chapter has outlined the nature of the forces that acted on the Natal environment between 1845 and 1870. The next four chapters will discuss the impact of these forces on a region-by-region basis, showing to what extent settler activity had transformed the environment by 1870.

## CHAPTER 3

### THE DURBAN AREA

#### Changes in forces acting on the environment

The white community living at the bay between 1845 and 1849 made little impact on the natural environment. The reason for this lay mostly in the occupations of the members of the civilian community. Unlike the earliest white settlers in Natal, they were not hunter-traders hunting to provide commodities for trade; instead, they were predominantly officials and traders of goods brought into the Colony. Their demands on the local resources were for domestic purposes only, which therefore minimised their impact on the environment. The resources they needed from it were fuel, food and building materials for the 30 to 40 huts they established on the grassy plain to the north of the bay.<sup>1</sup> Besides the civilian population, there was a small, resident British garrison of the 45th Regiment camped near the bay.<sup>2</sup> The settlement of Durban in 1849 was therefore small, as was the range of occupations of the inhabitants.

The arrival of the British settlers in the late 1840s and early 1850s had far-reaching implications, both directly and indirectly, for the Durban environment. As the population grew, so too did the physical spread of the town. Its urban growth, which included attaining municipal status, the establishment of a planned infrastructure, as well as some industrial development, was influenced by a settler elite, mainly of wealthy merchants, who controlled the local economy.<sup>3</sup> Under this leadership, Durban became a thriving port and the leading town in the Colony, with the range of occupations of the inhabitants reflecting its growing economic diversity. As all of these facets of the town's growth between 1845 and 1870 entailed a modification of the existing environment, they need to be examined.

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<sup>1</sup> J. Chapman, Travels in South Africa vol.1 (London, 1868), p. 2.

<sup>2</sup> Dalbiac, History of the 45th p. 156.

<sup>3</sup> For a full discussion on this see Bjorvig, 'Durban 1824-1910', see, in particular, p. 18.

The failure of the immigration schemes of the late 1840s and early 1850s led many immigrants to abandon their rural lots and settle in the towns. This influx caused Durban's white population to grow rapidly in the early 1850s, so that by 1854, when the town was incorporated as a borough, it consisted of 400 houses.<sup>4</sup> The town lands covered approximately 2 901 hectares (7 165 acres), with the limits being determined by natural barriers: in the east the Indian Ocean, in the north the Mngeni River, in the north-west the farms Springfield, Brickfield and Cato Manor, bordering the Berea ridge, and in the south the Mbilo River and the bay. However, not all of this land was available to the Town Council because the government appropriated land for botanical gardens, the Admiralty Reserve and for ordnance purposes. This left approximately 2 468 hectares (6 096 acres) of unalienated land under the control of the Town Council.<sup>5</sup> The extent of the town lands can be seen on Map 3.

As the Town Council influenced the rate and extent of the modification of the environment within the borough, it is important to consider exactly who held political power in Durban. From Bjorvig's discussion of this, it is clear that political power was based on economic wealth.<sup>6</sup> Suffrage was restricted through property qualifications which were even more stringent for those standing as Councillors. This ensured that the Councillors were wealthy property owners, while those who voted them into power were also property owners but on a much smaller scale. This meant that the people who were already leaders in the economic sphere now became leaders in the local political sphere and could entrench the existing social order.

Political power and economic wealth therefore became inextricably linked in early Durban. The Town Council, which controlled the distribution of resources from the town lands, was in a position to serve the needs of its Councillors and those who

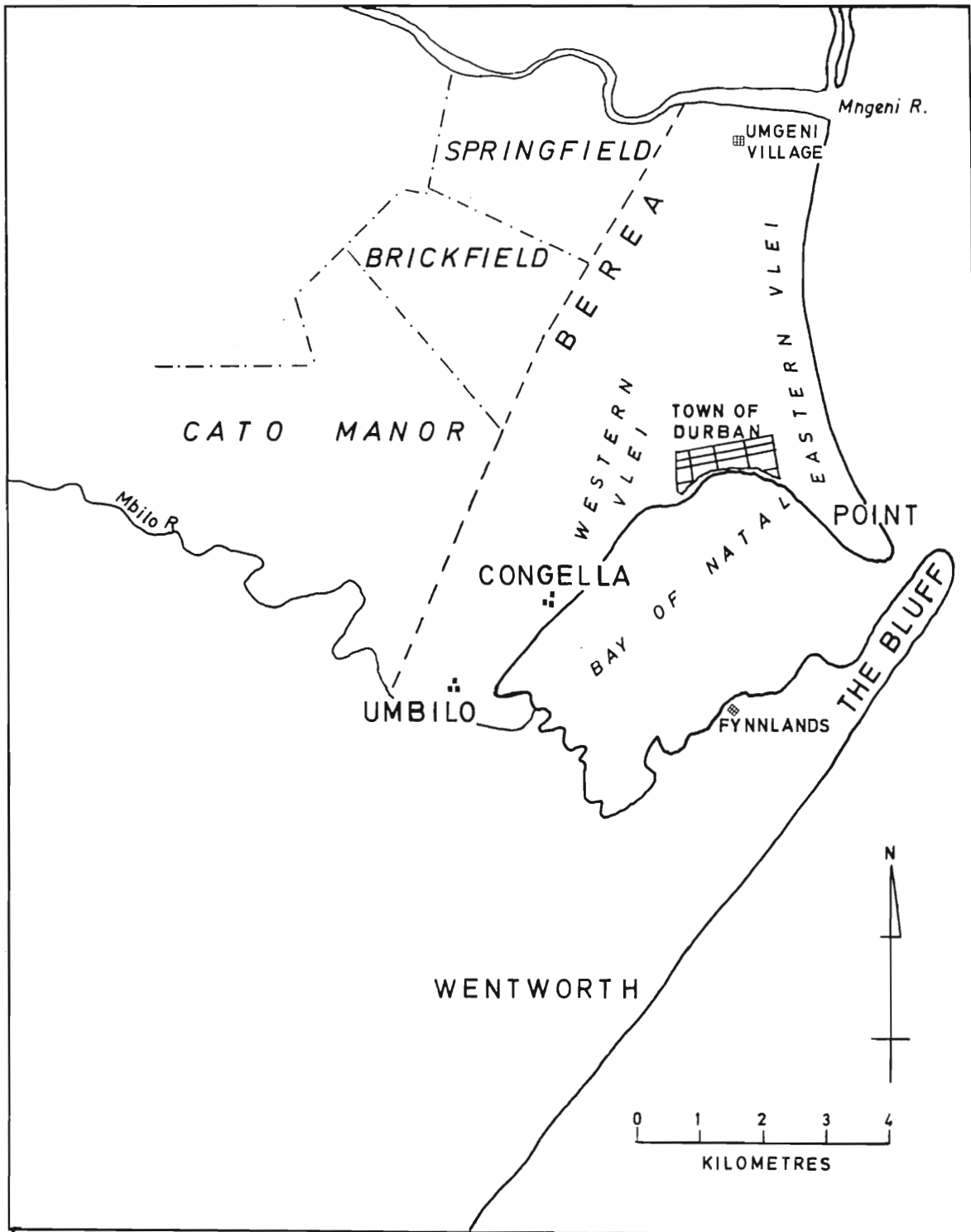
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<sup>4</sup> J.W. Colenso, Ten Weeks in Natal (Cambridge, 1855), p. 9.

<sup>5</sup> W.P.M. Henderson, Durban: Fifty Years of Municipal History (Durban, 1904), p. 6.

<sup>6</sup> Bvorvig, 'Durban 1824-1910', pp. 47-9.





Map 3: The Durban Townlands

qualified to vote. The poor remained politically powerless. The Town Council, however, was still under the jurisdiction of the colonial administration which could consider long-term changes to the environs of the port, and which could also pass laws to limit environmental exploitation of the area.

With Durban's white population growing so rapidly in the early 1850s, it was inevitable that the physical spread of the town would increase. Its expansion was limited, however, as it was flanked to the east and west by large vleis. Further, the grassy plain to the north of the town could not be built on as it was needed for grazing, essential in an era of animal-powered transport. The Town Council was therefore forced to open up new residential sites at some distance from the town. During the 1850s, lots on the Mbilu River were sold, as were plots on the Bluff, the Berea and at Congella. A further three localities were first inhabited during the 1860s: the township of Addington, sited at the back beach; Umgeni Village near the Mngeni River; while land on the edge of the western vlei was bought up by free Indians as it was the only place near Durban where there was no competition from white settlers for land because of the proximity of the vlei.<sup>7</sup> Because the physical-spatial spread of the town in the 1840s was limited to the grassy plain, little clearing of indigenous vegetation to allow for settlement had taken place. In the 1850s, however, the opening up of lots in areas that were more heavily wooded necessitated the destruction of much coastal bush.<sup>8</sup> In addition, as with the white community resident there in 1845, the newly arrived settlers needed firewood, building materials and food from the environment; their far greater numbers meant that these demands became heavier, thereby increasing the impact the settlers made on the environment.

The settlers also demarcated land for recreational purposes in accordance with British value-systems they brought with them.<sup>9</sup> They laid out a race course at the foot of the

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<sup>7</sup> R.J. Davies, 'The growth of the Durban metropolitan area', South African Geographical Journal, 45 (December 1963), p. 19.

<sup>8</sup> G.Russell, The History of Old Durban and Reminiscences of an Emigrant of 1850 (Durban, 1899, repr. Durban, 1971), p. 331.

<sup>9</sup> Bjorvig, 'Durban 1824-1910', p. 174.

Berea in 1852,<sup>10</sup> and several gardens and parks during the period under discussion: an experimental garden at the foot of the Berea in 1851; the town gardens on the site of the old market square in 1862; and the Victoria Park and Albert Park in 1864. The Victoria Park lay in the east, near Addington, while Albert Park lay in the west, on the margin of the bay. By 1870, then, Durban consisted of a clearly defined central business district, gardens and parks and outlying residential areas. There were 870 houses in the borough, housing 3 324 whites.<sup>11</sup>

As the major port of the Colony, the development of Durban's infrastructure was essential both to the government and to the resident settler elite who had a vested interest in fostering trade. Improvements to the harbour and to all roads leading to the harbour therefore went hand in hand. The government built the main roads, surfaced with stone, that radiated from Durban: Umgeni Road led northwards; Berea Road cut inland over the Berea ridge;<sup>12</sup> while Umbilo Road led southwards. Once Durban became a borough, the Town Council assumed responsibility for making and repairing all roads within it. The Council also made up the approaches to the bridges which the government had built over the Mngeni River to the north of the town and the Mbilu River to the south-west. Large quantities of stone had to be quarried from the local environment to provide for the surfacing of the roads, and for the development of the harbour works that the government embarked on.

In turn, the need to develop good access routes to the bayside led to a further change to the environment: the drainage of the vleis near the town. Once the eastern vlei had been drained in the 1850s,<sup>13</sup> it was possible to extend Durban's communication system with the Point. This was important because ships anchored in the deep water on the bay side of the Point, so goods had to be carted some distance to and from the town along a muddy track. This haulage was both slow and expensive. In order to further their

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<sup>10</sup> Russell, Old Durban, pp. 142-5.

<sup>11</sup> Robinson, Notes on Natal, p. xii.

<sup>12</sup> S.G.O. 111/1/16, p. 22, G.Close to Surveyor General, 15 February 1856.

<sup>13</sup> Henderson, Durban, p. 32.

own ends by making the Durban harbour far more efficient, a group of businessmen within the settler elite, led by George Cato, formed the Natal Railway Company which built a three kilometre (two mile) track from the Point to the town, opening it in June 1860.<sup>14</sup> The business sector benefited further in 1862 from the extensions of the line along one of the roads in the town, Pine Terrace.<sup>15</sup> A few years later the government extended the railway to the Mngeni quarry to facilitate the transport of sand stone from the quarry to the harbour works.<sup>16</sup>

Durban's growth also provided scope for the production of certain commercial commodities. Manual skilled artisans and semi-skilled persons, the 'low stratum' of settler society,<sup>17</sup> were able to make a living from using resources found in the local environment, such as shells for limeburning, thatching reeds, timber and stone. For example, of the 229 voters on the burgess roll of 1854, there were 17 whose livelihood depended directly on the exploitation of certain resources found within the borough: three limeburners, three stone masons, two thatchers, a wagon-maker, two sawyers, a cooper, a cabinet-maker, a ship-builder and three wheelwrights.<sup>18</sup> Other white male inhabitants who gained a living from natural resources, but who did not qualify for the vote because they did not meet the property qualification, included brickmakers<sup>19</sup> and a fisherman.<sup>20</sup> In the late 1850s a few salt manufactories were established but they did not last long, because they could not compete successfully with the price of imported salt.<sup>21</sup> A fishing company formed during the 1860s also proved a short-lived venture as it

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<sup>14</sup> BJORVIG, 'Durban 1824-1910', p. 17.

<sup>15</sup> *Ibid.*, pp. 235, 236.

<sup>16</sup> *Ibid.*, pp. 240, 241.

<sup>17</sup> *Ibid.*, p. 21.

<sup>18</sup> Natal Mercury, 1 June 1854.

<sup>19</sup> Russell, Old Durban, p. 92.

<sup>20</sup> Blue Book, 1854, p. 257.

<sup>21</sup> Russell, Old Durban, p. 346; Natal Mercury, 9 September 1858.

collapsed with the death of one of the partners.<sup>22</sup>

But the white settlers were not the only inhabitants of Durban. Africans too, as part of the population of Durban from its earliest times, played a role in changing the environment, either as entrepreneurs exploiting it directly, or as hired labourers. We have no population figures for Africans for the very early years in Durban, but from the 1850s onwards for the rest of the period under discussion, Africans formed about a third of the urban population.<sup>23</sup> They were the unskilled, manual labour force of the town, constructing buildings, roads, the harbour works and the railway; they also worked in the service sector or earned a living hawking foodstuffs and building materials.<sup>24</sup> In 1871 there were 1 771 Africans resident in the borough, but many who were involved in urban life lived beyond the borough limit.<sup>25</sup>

Another group within the Durban population who had an impact on the environment were free Indians. As from 1865, when the first group of indentured labourers were free to return to India or settle in Natal, some chose to live in Durban. By 1870 these numbered 656 Indians.<sup>26</sup> While many of these people found jobs in the service sector, others found niches in productive activities such as fishing and market gardening.<sup>27</sup>

Between 1845 and 1870, Durban was transformed from a tiny settlement of colonial officials and traders into the leading commercial centre of the Colony. As the size and needs of the town grew, so did production for the local market in the spheres of

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<sup>22</sup> Russell, Old Durban, p. 97; G.G. 1883, Report of the Fisheries Commission, p. 486.

<sup>23</sup> M.Swanson, ' "The Fate of the Natives": Black Durban and African Ideology', Natalia, 14 (1984), p. 59.

<sup>24</sup> Bjorvig, 'Durban 1824-1910', pp. 26-7; Russell, Old Durban, pp. 91, 94.

<sup>25</sup> There is no figure given in the Blue Book, 1870, p. R4, for Africans and Indians living within the borough. The only figure that could be found is the one cited for 1871, taken from Robinson, Notes on Natal, p. xii.

<sup>26</sup> *Ibid.*

<sup>27</sup> L.M. Thompson, 'Indian Immigration into Natal 1860-1872', Archives Year Book of South African History 1952, vol. 11 (Cape Town, 1952), pp. 52, 53.

handicraft manufacture, farming, quarrying, brick-making, fishing, hunting and salt-making. This expansion in the market for commodities caused a concomitant increase in the exploitation of natural resources which, together with the various construction works undertaken by the government and the Town Council, made an impact on the local environment.

The nature and effects of this human activity on the bay environs will now be considered under three headings - the changes in the landform and mineral resources, in the flora, and in the fauna.

### **Effects of human activity on the landform and mineral resources**

Over the period of twenty-five years under consideration, white settlers made only slight changes to the landform around Durban. On the land they reclaimed swampland and opened up new surface features through quarrying for stone; in the marine area they attempted to stabilize the Point and deepen the entrance to the harbour. Each of these activities will now be discussed.

The two main swamplands that the settlers drained bordered the settlement of Durban, blocking its access routes. The western vlei, the smaller one of the two, made a quagmire of the road to Congella. This was the first stretch of the road to the interior in the 1840s, but the government spent none of its limited resources on draining the vlei and improving the road, preferring instead to open up a new and shorter route to the interior over the Berea in 1850.<sup>28</sup> It was left to the initiative of a local farmer, James Brickhill, who had settled near the Mbilu River, to collect sufficient public subscriptions in 1853 to pay for the cutting and bridging of drainage furrows in the western vlei.<sup>29</sup> Once Durban attained municipal status the Town Council saw to such necessary works. The Council duly extended Brickhill's small furrows in 1857 by cutting a ditch up the vlei

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<sup>28</sup> C.S.O. 31, no. 56, W.Stanger to Secretary to Government, 18 March 1850.

<sup>29</sup> Russell, Old Durban, pp. 177, 178.

for its permanent drainage.<sup>30</sup>

The eastern vlei lay parallel to the coastline and stretched practically across the entire plain between the Mngeni and the bay. When the Mngeni flooded across the plain into the bay in 1848, it enlarged the swamp and made the road from the Point impassable in wet weather. After the Mngeni flooded again, in 1856, the Town Council followed the advice of the resident engineer at the harbour, John Milne. In 1857 it erected an embankment at the head of the vlei above the Umgeni brickfields to prevent future flooding. Part of the drain lay in Ordnance land; as the officer in charge of the Royal Engineers offered the services of the military, it was the 45th Regiment that led Milne's Drain, as it came to be called, out into the bay through Cato's Creek.<sup>31</sup> This scheme effectively drained off water for years.<sup>32</sup>

The drainage of the vleis made access to Durban easier. It also improved the sanitary condition of the town, as did the drainage of several of the main streets.<sup>33</sup> The reclamation of swampland meant that where there had been extensive vleis in 1845, by 1870 these were much reduced in size. The reclaimed land was then available for urban development.

Quarrying activity on the part of the settlers also modified the existing landform in a few places. In the 1840s there was little demand for building-stone, either by private individuals or the government. The small quantity that was needed for a few public buildings was taken from the nearest available deposits of sandstone which were on the Bluff.<sup>34</sup> This very limited scale of quarrying made no noticeable change to the landform

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<sup>30</sup> Ibid., p. 322.

<sup>31</sup> Ibid., p. 324.

<sup>32</sup> Henderson, Durban, p. 32.

<sup>33</sup> Russell, Old Durban, p. 228; D.A.R. Minutes of Durban Town Council, August 1854-August 1856, pp. 8, 60, 68, 17 February 1855.

<sup>34</sup> T. Duff, First Impressions of Natal by a Perthshire Ploughman (Edinburgh, 1850 repr. in Natalia, 7, 1977), p. 11.

of the Bluff.

During the 1850s, however, a new demand for building-stone arose. Filled with optimism over the Colony's economic prospects, the government embarked on some much-needed harbour works. These focused on stabilizing the shifting sands of the Point and deepening the water over the bar at the bay entrance so that larger ships could enter. The first problem was solved in 1850 by John Milne, a civil engineer who had recently arrived with the Byrne settlers, and who planted 'Hottentot's fig' to anchor the sand and extended numerous small piers of wattling into the bay. He was subsequently appointed as Resident Engineer at the harbour.<sup>35</sup> The second problem, that of deepening the water over the bar, proved far more difficult to solve. Milne's proposed solution to the bar problem lay in trying to create tidal scour through two stone breakwaters flanking the harbour entrance. The northern one was to project from the Point, the southern one from the Bluff. He calculated that these would need 304 800 tonnes (300, 000 tons) of stone to build.<sup>36</sup> The obvious deposits to use were those on the Bluff because of their proximity to the harbour works. Milne therefore opened up quarries on the Bluff, first one on the bay side, then two on the ocean side.<sup>37</sup> By October 1855 these quarries had supplied most of the 23 776 tonnes (23 402 tons) of stone that had been laid in the works.<sup>38</sup> Milne's scheme was criticized on several grounds by the new Lieutenant-Governor of Natal, John Scott.<sup>39</sup> As a result of an enquiry into harbour affairs, Milne was dismissed in 1858. By then, only approximately 137 metres (450 feet) of the proposed 670 metre (2 200 feet) northern pier existed, but his efforts had effectively deepened the water over the bar.

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<sup>35</sup> For discussion on Milne's role see L. Heydenrych, 'Port Natal Harbour, c. 1850-1897', in Guest and Sellers (eds.), Enterprise and Exploitation in a Victorian Colony, pp. 19-20; Russell, Old Durban, pp. 260, 261.

<sup>36</sup> Natal Mercury, 5 April 1854, letter from J. Milne.

<sup>37</sup> S.G.O. 111/9/2, p. 149, Report of 13 February 1857.

<sup>38</sup> G.H. 1210, p. 503, no. 60, Col. H. Cooper to Sec. of State, 19 October 1855.

<sup>39</sup> See Heydenrych, 'Port Natal harbour', p. 20, for this and the rest of the information in this paragraph.



In the 1860s, the Natal Legislative Council approved of a harbour scheme drawn up by Captain James Vetch. Vetch's scheme proposed building two new long breakwaters, one off the Bluff and the other off the Point, to the north of Milne's pier.<sup>40</sup> Far more stone was needed to begin this ambitious project, but by 1865 the small Bluff quarries were exhausted.<sup>41</sup> The government had then to look elsewhere for stone. An excellent deposit of sandstone on the right bank of the Mngeni River, a short distance above the new bridge, became the only source of stone used in the harbour works during the late 1860s. The extension of the Point railway to this quarry facilitated the rapid and cheap transport of stone,<sup>42</sup> while the use of a crane at the quarry increased the rate of quarrying from 1867 onwards.<sup>43</sup> During 1868 alone, 28 823 tonnes (28 371 tons) of stone were laid in the northern breakwater.<sup>44</sup> Although by 1870 this quarry must have shown signs of heavy exploitation, it remained in use for many years.

While the most significant demands for stone during the 1850s and 1860s were for the harbour works, the needs of the expanding town also required the opening up of new quarries within the borough limits and on farms bordering the borough.<sup>45</sup> The townsmen required stone for building, paving, and for hardening the roads. The annual Blue Books of Natal, which give the statistical returns of the Colony, have imprecise information on the number of quarries, their locality or their productive rate. We know that the Town Council took all workable deposits of stone under its control in 1855. Thereafter, any individual who wished to quarry these deposits had to lease the land from the Council.

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<sup>40</sup> *Ibid.*, p. 23.

<sup>41</sup> A.G.O. 1/10/1, p. 236: Report on the Harbour Works, May 1865.

<sup>42</sup> N.P.P. 95, no. 21, Report on the Harbour Works by Captain G. Gordon and P. Paterson, 13 June 1864; N.A.D. map E 115, Routes proposed for the railway about to be constructed from the Umgeni Stone Quarries to the Harbour Works, 8 July 1865, supplied by P. Paterson.

<sup>43</sup> Natal Mercury, 23 July 1867.

<sup>44</sup> G.H. 1217, no. 130, R. Keate to E. Grenville, 21 December, 1869.

<sup>45</sup> N.A.D. map D 94, plan to accompany Captain Vetch's report, Captain J. Vetch, R.E., 3 August 1859; S.G.O. 111/9/3, pp. 71, 72, Report on 4 April 1859; S.G.O. 111/9/3, pp. 182, 183, Report on 10 April 1859.

During the 1860s the Town Council needed stone from private quarries for hardening some of the main roads. A sandstone quarry just south of the village of Congella provided the necessary stone for the western embankment to be macadamised,<sup>46</sup> while a shale quarry at Congella supplied the paving stones for West Street.<sup>47</sup> The largest road-hardening operation undertaken by the Council was that concerning Berea Road, for it was begun in 1863 and was completed only in 1866. All the sandstone for this job came from Christopher Cato's farm, Brickfield.<sup>48</sup> As all these public works were on a relatively small scale, it is unlikely that any of these private quarries were worked out by 1870.

### **Effect of human activity on the flora**

The initial impression settlers formed of Durban and its environs was influenced by the apparently luxuriant plant growth around the port.<sup>49</sup> This formed a mass of green which was a welcome sight to many after weeks at sea. On closer inspection the vegetation was found to consist of mangrove swamps, reed beds, coastal forest or 'bush' and the grassy plain on which Durban itself stood. As the settlers cleared vegetation to make way for human settlement, used it as a source of energy, and exploited certain species selectively as the raw materials of building and specific manufacturing activities, each of these ecological zones was affected in a different way.

Along the Mngeni, Mbilo and Mhlathuzana Rivers lay extensive reed beds of tambukie grass. These beds were harvested by local Africans for thatching reeds for their huts throughout the period under discussion; in addition to this domestic consumption, some Africans gathered and sold or bartered reeds as a commodity to whites.<sup>50</sup> A settler's

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<sup>46</sup> Henderson, Durban, p. 54.

<sup>47</sup> Natal Mercury, 7 April 1868

<sup>48</sup> Henderson, Durban, p. 49.

<sup>49</sup> Chapman, Travels, vol. 1 p. 1; N.A.D. Bird Papers, Reminiscences of H. Griffin, p. 80.

<sup>50</sup> Russell, Old Durban, p. 91.

comment on this entrepreneurial activity shows how the Africans could use local resources to help satisfy their growing desire for British manufactured goods, for the reeds 'were cut by the Natives, brought on the heads of the women in long bundles, and were readily purchased in exchange for Emigrant biscuit, old clothes and hoop iron'.<sup>51</sup> The white inhabitants of Durban had several uses for the reeds. They formed partitions, ceilings and fences in addition to being a cheap roofing material that was also suitable in the warm climate.

Thatching provided a livelihood for both European and African craftsmen. In 1855, when Durban's residential area was expanding onto the Berea and the services of thatchers must have been in great demand, the burgess roll of about 240 persons listed three thatchers.<sup>52</sup> There were already about 400 houses in the borough by then, probably most of them thatched with reeds. As from 1861, however, the use of reeds as roofing material for the white inhabitants of Durban ceased. A building bye-law prohibited the use of thatch for roofing in the borough because it was a highly combustible material,<sup>53</sup> alternative roofing material such as tiles, slates, shingles and corrugated iron had to be used instead. Despite all the years of exploitation of the reed beds, it is unlikely that they would have been much depleted by 1870, as the reeds would have regrown rapidly after each harvesting.

The sandy plain on which Durban was sited was covered with coarse grass, dotted with clumps of wild date palms, wild bananas and wild fig trees.<sup>54</sup> Although we have no direct evidence to show that Africans used the plant resources of this particular zone, it was certainly typical of the areas from which they would have collected grass for mats and the stems of wild dates for brooms. They made these articles both for their own use and for sale to the settlers. As with their cutting of the thatching reeds, their exploitation of local resources was intensified because of the demands of the white townspeople for

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<sup>51</sup> Ibid.

<sup>52</sup> Natal Mercury, 30 May 1855.

<sup>53</sup> Henderson, Durban: Fifty Years of Municipal History, p. 49.

<sup>54</sup> Russell, Old Durban, p. 121.

these commodities. They hawked their wares around Durban, charging 1s for mats and 3d for brushes in 1850.<sup>55</sup> This practice was still common in 1855. As the Blue Book put it:

‘The Kafirs contribute to the calls of the Colonists by making from native fibrous plants, Baskets, Mats, and Sweeping Brooms, which they supply at a reasonable rate; ... The substances used in the manufacture of these articles grow abundantly...’<sup>56</sup>

While vegetation such as the coarse grass used for mats would have regenerated rapidly, leaving no sign of human interference, the wild date palms would have grown far more slowly. The effects of the destruction of the palms is evident in a record of the mid-1860s, for John Sanderson stated that ‘The Wild Date-palm... is also abundant on the coast and for some miles inland; but, as the natives make brooms of the stems, it is now seldom found of any great height.’<sup>57</sup>

The third ecological area to be discussed is that of the mangrove swamps. Early records show that both red and white mangrove trees grew abundantly at the bayhead and on the islands.<sup>58</sup> Being so close to the town they formed a ready supply of accessible timber so that for much of the period mangrove poles were used in the construction of houses, fencing, bridges and jetties.<sup>59</sup> White mangroves in particular also provided a fuel supply for the bayside industries of saltmaking and limeburning which drew on the abundant supply of shells found at the water’s edge. In the early 1850s there were two or three limeburners, operating in the vicinity of Cato’s Creek. They would therefore have utilized the mangrove resources nearby. In 1854, one of them, Charles McDonald,

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<sup>55</sup> D. Child (ed.), A Merchant Family in Early Natal: Diaries and Letters of Joseph and Marianne Churchill, 1850-1880 (Cape Town, 1979), p. 10.

<sup>56</sup>Blue Book, 1855, p. 318.

<sup>57</sup> J. Sanderson, ‘Rough Notes on the Botany of Natal’, in Chapman, Travels vol. 11, appendix p. 446.

<sup>58</sup> N.A.D. Moreland papers, Journal describing topography, fauna and flora of Natal, 1853, p. 255; N.A.D. Bird Papers, Reminiscences of H. Griffin, p. 80.

<sup>59</sup> Russell, Old Durban, p. 91; Natal Mercury, 9 July 1867; Natal Herald, 4 May 1868.

moved to Congella.<sup>60</sup> Consequently he began exploiting the mangroves at the west end of the bay where, in 1857, he also established a short-lived saltworks.<sup>61</sup> In order to cut mangroves from within the Admiralty Reserve, the limeburners needed permission from the Resident Magistrate. That this regulation was enforced is proved by the apprehension of the limeburner Walter Brunton by the Chief Constable in 1854 for cutting mangroves in the Admiralty Reserve without the necessary permission.<sup>62</sup> Brunton finally applied for a licence in 1855, asserting that there was enough mangrove wood locally available to last for 200 years.<sup>63</sup>

Events, however, proved Brunton's confident prediction wrong. Both the written and visual records indicate that in the early 1850s mangroves grew thickly around the bay;<sup>64</sup> by the mid-1860s, however, little of the mangrove forest remained. A Durban resident recorded the following:

'The Red Mangrove is so highly valued for posts, stakes, and other out-door purposes, that few trees of any size are now to be found in the Bay of Natal... The White Mangrove... is now equally scarce'.<sup>65</sup>

The Colonial Engineer himself noted the scarcity of red mangrove within the Colony in 1867,<sup>66</sup> and by 1869 there was no red mangrove timber available for use in the harbour works.<sup>67</sup> This may well have prompted the publication of a notice in 1869 which prohibited the destruction of any trees, bush or underwood from the islands of the bay or within a distance of 150 feet of the high water mark, unless with the permission of the

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<sup>60</sup> C.S.O. 2243, no. 642, C. McDonald to Colonial Secretary, 14 February 1854.

<sup>61</sup> Natal Mercury, 28 January 1858; Russell, Old Durban, p. 346.

<sup>62</sup> S.G.O. 111/1/9, p. 14, W. Brunton to Colonial Secretary, 17 January 1854.

<sup>63</sup> C.S.O. 2244, D. 91, W. Brunton to Acting Lt. Gov, 27 April 1855.

<sup>64</sup> Local History Museum, water colour by James West, View of Durban Bayhead from Bluff, 1856; Russell, Old Durban p. 72.

<sup>65</sup> Sanderson, 'Rough notes on the botany of Natal', Travels, pp. 451, 452.

<sup>66</sup> Natal Mercury, 9 July 1867.

<sup>67</sup> Killie Campbell Africana Library, Ms. 2537, Information for the civil engineer, 1869.

Harbour Conservancy Board<sup>68</sup> that had been formed in 1867.

Thick coastal 'bush', as it was known locally, covered the Berea and the Bluff, as well as the dunes from the Point to the Mngeni.<sup>69</sup> Settlers cut into this bush either to clear land for urban development or because they wanted the wood itself. While we have little information on their clearing activities, it is evident that when the new residential sites on the Bluff, at Addington and on the Berea were opened up, much bush would have been removed;<sup>70</sup> certainly the building of the Berea road caused a wide swath to be cut through the forest.<sup>71</sup> We know far more about the settlers cutting bush when the timber was needed for a specific purpose. Timber was much in demand for housing, furniture and wagons, which is why the thickly forested Berea lots were considered the most valuable of all the town lands.<sup>72</sup> The bush also supplied fuel, required for domestic, military and industrial purposes. Each of these uses will now be discussed.

When the settlers first arrived, they could cut fuel freely from the local bush, provided they kept off government land. Once the borough was proclaimed, the Council limited bush-cutting from the town lands to that needed by white families for their domestic use. Most settler families employed servants who collected firewood as part of their domestic duties. There were no officials appointed to check on the cutters, black or white, so the limits imposed on their activities were purely theoretical. As the individual households still retained access to this important resource, there was therefore no scope for a commercial enterprise to provide for the needs of the private sphere.<sup>73</sup>

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<sup>68</sup> Government Gazette, 1869, Government Notice No. 141, p. 487.

<sup>69</sup> See Lt. King's map, Chart of Port Natal, undated, printed in Russell, Old Durban, frontispiece.

<sup>70</sup> *Ibid.*, p. 331.

<sup>71</sup> C.S.O. 31, no. 56, W. Stanger to Col. Secretary, 18 March 1850.

<sup>72</sup> Natal Mercury, 23 May 1855.

<sup>73</sup> D.A.R. Office of the Durban Town Clerk, File 14a, Report of Committee Appointed to Consider the Subject of Cutting Wood in the Town Bush, October 1858.

The Town Council made an effort to keep a watchful eye on bush-cutting through appointing a committee to investigate it in the late 1850s.<sup>74</sup> It then failed to act on the suggestions made by the committee but there is no record to explain this lack of action. It was only in 1863 that the Town Council really took steps to limit bush-cutting. Having appointed a committee to consider the need for licences for bush-cutting, it duly agreed to the committee's recommendation of a licence fee of £2 and upwards per acre, with the price being determined by the council in each particular case.<sup>75</sup> To prevent Africans from cutting fuel from the town lands for their own purposes, the council resolved to issue a corporation notice informing burgesses that they were to provide their African employees with tickets bearing the name of both employer and employee. Africans cutting wood without such tickets would be apprehended by the police. To enforce this, the Police Superintendent was to employ six extra African police who were to question all Africans entering the town with bundles of wood to find out where they had obtained it from. The proposed corporation notice duly appeared in the Mercury<sup>76</sup> but no evidence could be found to determine whether this regulation was actually implemented.

By 1870, when the white population stood at 3 147, the amount of firewood cut each month from the town lands for domestic consumption must have been considerable. According to an estimate made by the Surveyor-General in 1874, a family of six used approximately 1½ tonnes (1½ tons) of firewood per month.<sup>77</sup> This meant that in 1870 Durban residents would have needed about 799 tonnes (786 tons) of firewood monthly. In addition, it is probable that Africans were still cutting fuel for their own use from the town lands, despite the Council's attempt to prevent this.

The fuel requirements of the military camp at Port Natal also had to be met from local

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<sup>74</sup> D.A.R. Minutes of the Durban Town Council (September 1856 - September 1858), p. 330, 13 April 1858.

<sup>75</sup> D.A.R. Minutes of the Durban Town Council, vol. 1, p. 472, 24 April 1863.

<sup>76</sup> Natal Mercury, 7 July 1863.

<sup>77</sup> S.G.O. 111/9/8, p. 554, Report on forests from which timber is obtained, 18 November 1874.

resources. In 1857, for instance, the daily consumption of fuel at the camp was approximately 313 kilograms (690 lbs), apparently supplied by private tender.<sup>78</sup> There seems to be no record of who supplied the fuel, or from where it was gathered, but it is most likely that it was cut in the vicinity of Durban. This activity would therefore have contributed to the denuding of the environs of the town.

Local reserves of wood were also used as fuel for the light industries that were established: limeburning, saltmaking and brickmaking. Up until 1855 firewood could be collected from the land around the town, but thereafter it was necessary to obtain a permit from the council to cut wood for industrial purposes. The limeburners, as has been discussed already, drew their fuel supplies from the mangrove swamps close to their works, as did the saltworks at the west end of the bay. The brickyards, by contrast, were positioned at several places: Greyville, the foot of the Berea, behind the Berea, and at the Mngeni.<sup>79</sup> They were all established in the early 1850s and remained in operation throughout the period. Presumably fuel was gathered in the vicinity of each of these sites, which would have made some impact on the vegetation there, but there is no record to substantiate this claim. Certainly, by 1859 the brickmakers were having difficulty in obtaining fuel, which caused them to increase their prices,<sup>80</sup> but we do not know whether the problem lay in obtaining permits to cut fuel or in a lack of suitable fuel. At a special meeting of the Town Council in 1867, it was suggested that stringent regulations be made to prevent limeburners and brickmakers from cutting fuel from the bush,<sup>81</sup> but nothing came of this suggestion.

As the local bush contained tall forest trees it was a source of good timber. Yellow wood, knobthorn, stinkwood and red milkwood trees were felled by settlers to provide

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<sup>78</sup> Russell, Old Durban, p. 287.

<sup>79</sup> *Ibid.*, p. 92.

<sup>80</sup> Natal Mercury, 10 June 1859.

<sup>81</sup> D.A.R. Durban Town Clerk's Report Book (June 1865 - February 1868), pp. 232, 233.



timber for furniture and shop fittings.<sup>82</sup> Milkwood was also felled to build small vessels, while yellowwood and essenwood timber made good planking.<sup>83</sup> These last three were used, together with numerous other types of timber, in wagon building.<sup>84</sup>

Settlers were able to draw on this local resource of timber to earn a living. The burgess' roll of about 240 people in 1855 listed two wagonmakers, three coopers, two sawyers, a cabinetmaker, three wheelwrights and a ship's carpenter.<sup>85</sup> Ten years later the number of producers who needed timber as a raw material was still about the same, although the white population of Durban had increased by about 2 000 people.<sup>86</sup> One group of producers who were temporarily out of business in the late 1860s were the wagonmakers. According to a man who made wagons in Durban for about twenty years. 'We did very well at our business until the time of the Basuto war (1866) when the trade fell off. The Dutch did a great deal of business with us, but that war put a stop to them coming to Natal.'<sup>87</sup> Once the depression of the 1860s and the Basuto war were over, the wagon-making business picked up again. Until the railway was opened up from Durban to Pietermaritzburg in December 1880, the wagon was the most common form of transport between the two towns.

For the government, timber was a vital resource that might be needed at anytime for government building operations. The government therefore attempted to protect the forests on government ground by issuing certain regulations. The first of these promulgated in 1849,<sup>88</sup> forbade tree felling on government ground, in or near Durban,

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<sup>82</sup> Russell, Old Durban, p. 103

<sup>83</sup> Natal Mercury, 9 July 1867; Natal Times and Durban Mercantile and Agricultural Gazette, 20 August 1852; Mann (ed.), The Colony of Natal, p. 154.

<sup>84</sup> See Appendix.

<sup>85</sup> Natal Mercury, 30 May 1855.

<sup>86</sup> Natal Mercury, 15 June 1865.

<sup>87</sup> N.A.D. Bird Papers, Reminiscences of S.W.B. Griffin.

<sup>88</sup> Government Gazette, 1849, Gazette no. 30, Government Notice No. 56 of 1849.

without the special permission of a magistrate. It is probable that this notice was largely ignored as William Stanger, for example, noted in 1850 that many trees on the Berea had been 'wantonly and maliciously' felled.<sup>89</sup>

Further Government Notices, in the early 1850s, restricted the cutting of timber from government forests. Captain Bell, for one, fell foul of the law by cutting timber on the Bluff in 1853.<sup>90</sup> However, it is interesting to note that when one of the settler elite, George Cato, sought permission to fell timber to build a boat, it was granted.<sup>91</sup> In terms of a proclamation of September 1853,<sup>92</sup> timber could no longer be removed from Crown land unless a licence of £2 per saw per month was paid. The fact that a man who earned a living cutting and selling timber for buildings was apprehended and told to obtain the necessary licence<sup>93</sup> shows that the authorities in Durban were concerned to implement the new legislation, although no officials had been appointed to enforce it.

Once the borough was formed in 1854, the Town Council took over control of timber cutting on the town lands. To a certain extent this enabled forest conservation measures to be practised. For example, in 1863 the council passed a resolution aimed at protecting particularly large trees on the town lands from being felled.<sup>94</sup> As there was only the Superintendent of Police to implement these regulations, besides fulfilling all his other duties, no doubt much illegal tree-felling occurred. The records do, however, show that at least one offender was apprehended and fined.<sup>95</sup> In 1867 the Town Council considered appointing a forester to prevent the indiscriminate felling of timber on

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<sup>89</sup> C.S.O. 31, no. 56, W. Stanger to Colonial Secretary, 18 March 1850.

<sup>90</sup> S.G.O. 111/1/10, p. 63, Chief Constable to Surveyor-General, 9 August 1853.

<sup>91</sup> C.S.O. 2242, no. 505, G.C. Cato to Colonial Secretary, 11 July 1853.

<sup>92</sup> This was discussed in Chapter 2.

<sup>93</sup> S.G.O. 111/1/9, p. 8, R. Boyne to Surveyor-General, 14 January 1854.

<sup>94</sup> D.A.R. Minutes of Durban Town Council, vol. 1, p. 472, 24 April 1863.

<sup>95</sup> D.A.R. Minutes of Durban Town Council, vol. 4, p. 421, 4 December 1866.

borough lands,<sup>96</sup> but this was not done. The record contains no explanation why the council failed to implement this suggestion.

The fact that Durban's white inhabitants made a marked impact on the timber resources of the area shows that all the above-mentioned regulations were ineffective in the long term. Whereas in 1850 there were plenty of timber trees in the neighbourhood, with red milkwood in particular being plentiful,<sup>97</sup> after fifteen or so years of heavy exploitation few large trees, even red milkwood, were left standing near the town.<sup>98</sup> The forests had therefore diminished rapidly through the selective felling of favoured species. As no effort was made to cultivate seedlings of these particular species, they were permanently eliminated. Their removal also affected the forest microclimates, for most of the trees felled for timber belonged to canopy species. Early in 1872 the Surveyor-General pointed out to the Colonial Secretary that the vegetation around the bay had been denuded. He enclosed an extract from a meeting of the Harbour Conservancy Board recommending the appointment of a person to enforce the restrictions on timber-cutting.<sup>99</sup> In response to this the governor appointed P.B. Shortt as forest conservator for the bay in July 1872, with an annual salary of £36.<sup>100</sup> As his salary was triple that of the other three forest conservators appointed that year for other areas in Natal, one can assume that his duties were likely to be far more onerous.

Even though indigenous timber trees provided wood that was suitable for building and carpentry, timber was imported into Natal. Records throughout the period show that deal, spruce, yellow and red pine,<sup>101</sup> and other softwoods and hardwoods were imported from Prussia, Sweden, England, Australia, Bombay, North America and the Cape.<sup>102</sup> As

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<sup>96</sup> D.A.R. Durban Town Clerk's Report Book (June 1865 - February 1868), pp. 232, 233.

<sup>97</sup> Natal Witness, 23 June 1854; Hattersley, The British Settlement of Natal, p. 271.

<sup>98</sup> Sanderson, 'Rough notes on the botany of Natal', pp. 446-54.

<sup>99</sup> C.S.O. 406, R 427, P.C. Sutherland to Colonial Secretary, 27 February 1872.

<sup>100</sup> Blue Book, 1872, p. M 40.

<sup>101</sup> Natal Times, 2 January 1852.

<sup>102</sup> This is evident from the list of imports in the Blue Books, 1850-1870.

Natal's forests had not yet been exhausted, it is clear that the merchants found it cheaper to import timber than pay local sawyers to fell indigenous timber. A record from the mid-1860s, when there were about ten saw mills operating in the midlands of Natal, states 'D'Urban now uses a good quantity of deal, principally owing to the expensive carriage of native woods from the bush.'<sup>103</sup> It is possible to argue, therefore, that high transport costs saved the inland timber resources from more intensive exploitation during the period of study. An article from a local newspaper summed up the position in 1867:

'Yellowwood timber, up to seven or eight years ago, was almost the only timber used throughout the Colony for carpenters' and joiners' work, but large quantities of Baltic and American deal are now imported, and have utterly superseded yellowwood in the coast districts. The cost of transport, however, prevents, as yet, the use of deal to any extent in the uplands districts.'<sup>104</sup>

The settlers not only destroyed indigenous vegetation, they also deliberately introduced other plant species into Natal. In Durban, the amateur botanist, Robert Jameson, imported Australian prairie grass (called Bromus schaderie in those days) in 1869.<sup>105</sup> He immediately offered it to the Town Council to stabilize the sand towards the race course. The grass also provided a good horse and cattle feed.

The vegetation of the environs of the bay was also altered through the accidental introduction, in the mid-1850s, of the burr weed.<sup>106</sup> The Durban Town Council played a role in trying to eliminate this harmful weed. It formed a committee to report on those steps necessary to destroy the plant.<sup>107</sup> These steps included the need for the corporation street keeper to report on the incidence of the weed in the borough, and the allocation of an extra labourer to help destroy the weed. The committee urged that the

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<sup>103</sup> J.H. Holliday, Dottings on Natal as Published in 1865, and Sundry Tit-Bits of Colonial Experience (Pietermaritzburg, 1890), p. 5.

<sup>104</sup> Natal Mercury, 9 July 1867.

<sup>105</sup> D.A.R. Office of the Durban Town Clerk, File 51, R.Jameson to the Mayor, 15 November 1869; Note: The grass is now (1998) called Bromus wildenowii, used for winter green pastures.

<sup>106</sup> As discussed in Chapter 2.

<sup>107</sup> D.A.R. Minutes of the Durban Town Council, October 1858 - November 1861, pp. 402, 405, 408, 525.

Colonial Secretary issue a notice encouraging all persons to assist in the extirpation of the weed.<sup>108</sup> This was duly done through Government Notice No.36 of 1861. As this measure relied on the co-operation of the colonists to eradicate the weed, without the appointment of an officer to see to its enforcement, it is not surprising that the weed continued to thrive in Natal.

### **Effect of human activity on the fauna**

In 1845 a wide variety of fauna still found suitable habitats in the environs of Durban, in the sea and bay, the rivers, reed swamps, the grasslands and the coastal bush. As the settlers expanded the built-up area they caused some animals species to withdraw from the locality of their own accord. Through this process alone the composition of the local fauna would have changed over time. But in addition, certain species were actively preyed upon by the human population for food, sport, trophies and collecting purposes, besides being killed in defence of lives and property. So the fauna around Durban decreased in number and variety throughout the period under discussion. This process of change will be discussed first in relation to mammals (both herbivorous and carnivorous), then birds, reptiles, fish and shelled animals.

The carnivores which the settlers feared the most were the lion and leopard, for they were dangerous to persons and their livestock. They therefore attempted to eliminate these animals from the environs of the town. Lion seem to have moved away from the settlement fairly early on, for the last record of a lion in the vicinity dates from 1854.<sup>109</sup> Leopard, on the other hand, were still found near Durban in the late 1850s, despite the fact that both black and white people laid traps for them in the forest.<sup>110</sup> By the time the Noxious Animals law, discussed in Chapter 2, was passed in 1866, listing these animals as 'noxious' and offering a reward for their destruction, it is doubtful whether they were

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<sup>108</sup> D.A.R., Office of the Durban Town Clerk, File 14a, Report on the Destruction of the Spiny Burdock, 11 February 1861.

<sup>109</sup> Natal Commercial Advertiser, 8 July 1854.

<sup>110</sup> Natal Mercury, 7 May 1857; D. Leslie, Among the Zulus and Amatongas (Glasgow, 1875), p. 219.

found near Durban at all: certainly no records have been located to indicate the reverse.

The herbivores living in all the habitats around Durban in 1845 were numerous. There were elephant, buffalo, antelope (bush buck, reedbuck, grey duiker and red duiker), hippopotamus, bushpigs and monkeys, to name only the more obvious ones. Settlers destroyed many of the buck and the larger animals, gradually eliminating them from the area.

Hippopotamus were shot because they destroyed settler gardens in their nocturnal wanderings. The nearest hippopotamus to Durban in the 1850s were those in Sea Cow Lake, north of Mngeni. They were seen and heard in the town itself only after the flood of 1856.<sup>111</sup> Presumably once the flood water had receded the hippopotamus returned to Sea Cow Lake. It is interesting to note that the destruction of the hippopotamus may well have exacerbated the effects of the Mngeni flooding in 1848 and 1856. As hippopotamus leave the water for their nocturnal grazing, they make furrows in the reeds near the water. These serve as natural channels for flood water, so that the water flows out through numerous outlets instead of bursting a bank at some weak point and causing severe damage. Had hippopotamus numbers not been so seriously reduced in the early years of white settlement, it is possible that the damage caused by the floods would have been less severe.

Buffalo and elephant were killed mainly for sport by the settler elite and the officers of the garrison. In the 1840s there were herds of these animals in the thick forest of the Berea, and in the Mngeni bush.<sup>112</sup> Over the next ten years they must have been killed off and driven away by sportsmen such as George Cato and Captain Garden,<sup>113</sup> for there are no known records of these animals being in the vicinity of Durban from the late 1850s onwards.<sup>114</sup>

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<sup>111</sup> Natal Mercury, 25 April 1856.

<sup>112</sup> Drayson, Sporting Scenes, p. 77; S.G.O. 111/1/3, T. Okes to W. Stanger, 24 July 1846.

<sup>113</sup> E. Goetzsche, Father of a City (Pietermaritzburg, 1960) pp. 76, 84.

<sup>114</sup> Russell, Old Durban, pp. 271, 272.

Other herbivores, particularly buck, were shot for food. Although this must have been a relatively common occurrence in the 1850s, when many of the settlers were struggling to survive, there are very few records of it. One statement dates from 1850, when game was still plentiful in the bush: 'buck-meat was a common article of diet, varied occasionally by bush-pig'.<sup>115</sup> In addition to shooting game for food, settlers could sometimes purchase it from Africans. One young Durban housewife, for example, paid 2s 6d in 1852 for a 'fine, fat young buck'.<sup>116</sup>

While the disappearance of large animals such as lion and elephant can be dated fairly accurately, the same cannot be said for the smaller species. Comments on the diminution of other game during the period under discussion are vague. The noted hunter, David Leslie, for instance, remarked in 1859 that the game had been, 'thinned off' near the town.<sup>117</sup> Once the game law of 1866 came into effect, certain animals were protected during closed seasons, as discussed in Chapter 2: partridge, pheasant, guinea fowl, ostrich, buffalo and most of the buck species commonly found. The game law allowed resident magistrates to issue shooting licences; holders of these licences were then free to shoot where they liked during the open season, provided it was not on private land.

This system appears to have led to some reckless shooting near Durban in 1869, so the Town Council decided to step in and issue special regulations regarding shooting on the town lands.<sup>118</sup> These laid down that there would be no shooting on the Berea between the Mngeni and the Mbilo Rivers; whereas for 10s a year, persons over the age of sixteen could get a permit to shoot on the Congella flats, the vleis, the race-course and the back beach bush near the Point.<sup>119</sup> Although this attempt by the council to control hunting

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<sup>115</sup> Ibid., p. 96.

<sup>116</sup> E.W. Fielden, My African Home; or Bush Life in Natal when a Young Colony, 1852-7 (London, 1887, repr. Durban, 1973), p. 17.

<sup>117</sup> Leslie, Among the Zulus and Amatongas, p. 6.

<sup>118</sup> Natal Herald, 9 September 1869.

<sup>119</sup> Ibid., 28 October 1869.

seems to have arisen from concern for settler safety, it is probable that it was also aimed at slowing the destruction of game on the town lands. Certainly the response of the Natal Herald in 1869 to the regulations suggests that this was so, for it stated that 'the recreation of the legitimate sportsmen should have some protection, or otherwise there will shortly not be a head of game... left in the neighbourhood'.<sup>120</sup>

The activities of the settlers also led to the diminution of the birdlife in the town's environs. Avian resources were prolific in 1845, with pelicans, flamingoes, hadedas, cranes, egrets and spoonbills flocking to the bay and the islands; while the grasslands, reed beds and thick bush all teemed with birds.<sup>121</sup> As the town grew and the vleis were drained, the size of the feeding places for wild duck and snipe were reduced,<sup>122</sup> while suburban development on the Berea and the Bluff disturbed the bird life through forest clearance.

Settlers diminished the bird life further by deliberately shooting birds. For the immigrants of 1850, the blue and green pigeons from the coastal bush were a source of food.<sup>123</sup> Birds also brought in revenue for a few settlers who collected them to send to museums.<sup>124</sup> This activity continued throughout the period under discussion. Birds were also killed for sport, with the islands of the bay being popular haunts.<sup>125</sup> The destruction of birds to provide feathers for trade was not a factor in the reduction of the bird life near Durban as there were no birds with suitable feathers in the vicinity.

Neither the government nor the Town Council took any cognizance of the warnings

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<sup>120</sup> Ibid., 9 September 1869.

<sup>121</sup> Drayson, Sporting Scenes, p. 45; Russell, Old Durban, p. 72.

<sup>122</sup> Ibid., p. 228.

<sup>123</sup> Ibid., p. 96.

<sup>124</sup> Durban Observer, 19 September 1851; Natal Times and Durban Mercantile and Agricultural Gazette, 13 August 1852; Colenso, Ten Weeks in Natal, p. 29; Natal Mercury, 6 July 1867, advertisement by J.Hoffman.

<sup>125</sup> Natal Mercury, 7 July 1856; Russell, Old Durban, pp. 72, 96.



given, in 1866, by a local resident on the subject of the heedless killing of birds.<sup>126</sup> Instead, the destructive settler activity set in motion an irreversible process. The parks proclaimed by the council were too small to provide an adequate refuge for fauna, and public awareness of the diminution of the bird life came too late. As one of the settlers remarked in later years, the government could well have taken steps to preserve the fauna:

‘In those days, when crown lands were valued and sold at four shillings and sixpence an acre, it would have cost Government but little to set aside a three thousand acre bush sanctuary to preserve for us all this beautiful and interesting life. No one had the vision to see how fast it would all vanish before the insatiable thirst to get-rich-quickly’.<sup>127</sup>

While one cannot pinpoint exact dates in this process of change, it is clear that the early settlers were responsible for much of the destruction of Durban’s birdlife.

There were two species of reptiles that were preyed upon by local settlers, for different reasons. Turtles, which were described as being plentiful in the bay in 1850,<sup>128</sup> were a good food source. References relating to their presence in the bay or their capture exist throughout the period under discussion,<sup>129</sup> indicating that settler exploitation did not eliminate the turtle population. Crocodiles, on the other hand, living in the reeds of the alluvial flats, were shot because they posed a threat to the safety of people crossing rivers and livestock drinking at the water’s edge. With the increase in traffic to the bay during the 1850s, a colonist claimed that the appearance of crocodiles became more rare,<sup>130</sup> although on occasions several could be seen at once.<sup>131</sup> There seem to be no records of crocodiles being sighted near Durban in the 1860s. Presumably by then they had either

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<sup>126</sup> Natal Herald, 19 July 1866, letter from J. Sanderson; Sanderson ‘A study of natural history and the association for its promotion’, p. 36.

<sup>127</sup> F.F. Churchill, In Old Natal, (----, 1922?), p. 3.

<sup>128</sup> Russell, Old Durban, p. 73.

<sup>129</sup> Natal Times, 30 January 1852; The Natal Advertiser and Mercantile Gazette, 22 December 1854; Natal Mercury,: 14 March 1856, 27 February 1866, 19 September 1867; Natal Herald, 11 April 1870.

<sup>130</sup> W.C. Holden, History of the Colony of Natal, South Africa, (London, 1855), p. 17.

<sup>131</sup> Natal Mercury: 29 April 1858, 21 April 1859, 24 November 1859.

been destroyed or had moved away from the settlement.

As with the turtles, the fish in the bay and off the coast were a source of food for the settlers. Numerous records attest to both the variety and the quantity of fish in the bay in the 1850s and early 1860s, with the most common being rock-cod, springer, mullet, Cape salmon, shad, stumpnose, bonito and albacore.<sup>132</sup> Despite the richness of the fish resources, few whites earned a living as fishermen in the 1850s because, though prices were good, customers were 'scarce and scattered'.<sup>133</sup> In 1854, for example, the official records show that there was only one white family earning a living from fishing.<sup>134</sup> Some Africans also caught and sold fish; in the late 1840s Mnini's Thuli people conducted a steady trade in fish, worth between £100 and £200 per annum, with the settlers.<sup>135</sup> Despite the fishing done by both whites and Africans, there are records of dried and pickled fish being imported into Natal throughout the period under discussion.<sup>136</sup> While this may have been for the inland trade, some of the imports could have been consumed locally, thereby freeing settlers from any dependence on the Durban market.

In the 1860s the scale of exploitation of fish resources increased considerably. Part of the explanation for this lies with the fact that the importation of Indian labourers into the coastlands created a far greater demand for fish as food as it formed the staple diet of the labourers. As one colonist commented just before the arrival of the Indians, 'Consternation prevailed: the only thing in readiness was a store of fish in pickle'.<sup>137</sup> In order to meet this increased demand more people were able to earn their living from

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<sup>132</sup> Natal Star, 5 March 1856; G.H. 1214, no. 127, J. Scott to the Duke of Newcastle, 22 November 1863; Duff, 'First Impressions of Natal' p. 17; Blue Book, 1854, pg. 257.

<sup>133</sup> Russell, Old Durban, pp. 96, 97.

<sup>134</sup> Blue Book, 1854, p. 257; Fielden, My African Home, p. 96.

<sup>135</sup> Slater, 'The changing pattern of economic relationships', p. 156; Drayson, Sporting Scenes, p. 305.

<sup>136</sup> Blue Book, 1850, p. 138; Ibid., 1857, pages not numbered; Ibid., 1858, p. 188; Ibid., 1859, p. 212; Ibid., 1861, p. 228; Ibid., 1862, p. V16; Ibid., 1863, p. V18; Ibid., 1864, p. V18; Ibid., 1865, p. V16; Ibid., 1866, p. V16; Ibid., 1867, p. V16; Ibid., 1868, p. V18; Ibid., 1869, V20.

<sup>137</sup> Russell, Old Durban, p. 490.

fishing. In 1865, for example, the number of white fisherman fishing in the bay had risen to ten.<sup>138</sup> Off-shore fish resources began to be utilized by a small fishing company, the Birkenhead Industry, which operated from the Bluff from 1862. At the height of its activity, in 1866, a typical haul was about 6 tonnes (6 tons),<sup>139</sup> that is about 1 500 large and middle-sized fish, and the local newspapers enthused over this local supply of 'coolie rations'.<sup>140</sup> This fishing company proved to be a short-lived venture, however, for with the death of one the partners in 1868 it collapsed.

The year 1866 saw another important facet of the informal fishing industry develop. A new group of fishermen were to be found at the bay, comprising a number of Indians who had completed their period of indentured labour. As fish formed such an important part of their diet it was not surprising that many Indians went to the bay to fish. Almost immediately, protests from the the white community appeared in the local papers because the small size of the mesh of the Indians' fishing nets trapped many fry;<sup>141</sup> since about 70 nets were in daily use,<sup>142</sup> the long-term consequences for the fish supply would have been serious. The protesters gathered weight for their argument from the claim of the harbour officials that small fish were disappearing rapidly from the bay.<sup>143</sup>

The government reacted promptly to the settler complaints. It appointed a Conservancy Board in May 1867, consisting of the Surveyor-General, the Collector of Customs, the Port Captain and the Colonial Engineer.<sup>144</sup> One of the Board's duties was to make suggestions for the protection of fish in the bay. As the Lieutenant-Governor felt that

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<sup>138</sup> Blue Book, 1865, p. Y9.

<sup>139</sup> Natal Mercury, 13 September 1866.

<sup>140</sup> Natal Herald, 18 October 1866; Natal Mercury, 20 February 1866, 24 March 1866.

<sup>141</sup> Natal Mercury, 29 November 1866; Natal Herald, 13 December 1866.

<sup>142</sup> Natal Herald, 13 December 1866.

<sup>143</sup> Selected Documents Presented to Legislative Council, vol. 3, Document no. 8, 1867.

<sup>144</sup> S.G.O. 111/1/36, D. Erskine to Surveyor-General, 7 May 1867.

legislation on the matter would be of public benefit,<sup>145</sup> a law concerning fishing in the bay was gazetted in October 1867.<sup>146</sup>

This was the Colony's first law on fish capture and it was greeted with delight by the white-owned local papers.<sup>147</sup> The Attorney General, however, took a different view:

'I personally object to it as it will interfere with the capture of fish by Coolies and Kafirs and will create a monopoly if carried out, but as there are no conservators or water bailiffs to carry it out, it will remain practically inoperable.'<sup>148</sup>

Here the Attorney-General points out what was the recurring problem in the Natal legislation on environmental affairs, the fact that the law did not provide for the appointment of special officers to enforce it. As the members of the Conservancy Board were all officials in full-time employment, it is unlikely that they had the opportunity to apprehend many offenders.

The most important clauses of the law related to a licencing system and to the nature of the nets to be used, although no exact dimensions were given for the nets. A fisherman needed a licence costing £1 to use a net or a fish trap. Such licences were to be issued by the Resident Magistrate, with the Lieutenant-Governor to decide the duration and conditions of the licence. The penalty for offences against the law could not exceed £5.

The Secretary of State, the Duke of Buckingham, was not satisfied with the law, as the size of the mesh had not been stipulated. He also suggested that some penalty be included for all who damaged or removed fish from traps.<sup>149</sup> The law was duly repealed, and a revised law gazetted in September 1868 took immediate effect.<sup>150</sup> This law

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<sup>145</sup> G.H. 1216, p. 30, no. 78, R. Keate to Duke of Buckingham, 8 November 1869.

<sup>146</sup> Government Gazette, p. 440. Law No. 13, 1867.

<sup>147</sup> Natal Herald, 15 August 1867 (leader); Natal Mercury, 3 August 1867.

<sup>148</sup> A.G.O. 1/10/2, pp. 24, 25, Report on Fisheries Bill, September 1867.

<sup>149</sup> G.H. 48, p. 27, no. 60, Duke of Buckingham to R. Keate, 10 January 1868.

<sup>150</sup> Government Gazette, p. 347, Law No. 8, 1868.

stipulated the minimum size of the mesh when wet, and the length of the net. It also stipulated a fine of up to £5 for anyone found damaging nets or stealing fish from traps.

Despite a steady demand for fish, there was still no well-developed fishing industry by 1870. The fishing law certainly stemmed the flow of complaints concerning the Indians' nets, but we have no records to show whether the law was implemented or not. Although it seems unlikely as, once again, there was no special officer appointed to apprehend offenders, the fact that 22 people took out fishing licences in 1868<sup>151</sup> indicates that some fishermen took the law seriously. Despite the number of fishermen operating at the bay, it appears that by 1870 the fish resources there were still inexhaustible.

Some of the smaller animals such as molluscs and arthropods were also utilized by the settlers. As limestone was scarce around Durban, the deep banks of shells washed up on the shore<sup>152</sup> were valuable because they were easily collected and burned to make lime for use as mortar.<sup>153</sup> Between 1850 and 1870 several limeburners drew on this resource each year. Shells were also removed when some visiting ships in the late 1860s took to collecting shells from the islands of the bay as a more lucrative form of ballast than sand: the shells were sold once the ships reached England. Local newspapers appealed to the authorities to prevent this destruction of a resource that was valuable not only in lime-making but also in the construction of garden paths.<sup>154</sup> Despite the depredations made on it, the supply of shells was still sufficient in 1869 for a local limeburner to offer the government a large supply of lime (1 000 muids) per month for mortar for the harbour works.<sup>155</sup>

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<sup>151</sup> Blue Book, 1868, p. Y 11.

<sup>152</sup> N.A.D. Moreland Papers, Journal describing topography..., 1853, pp. 229, 273; Holden, History of the Colony, p. 30; R. Russell, Natal: The Land and its Story (Pietermaritzburg, 1891), p. 41.

<sup>153</sup> Russell, Old Durban, p. 92.

<sup>154</sup> Natal Mercury: 29 May 1866, 16 February 1867; Natal Herald, 19 July 1866.

<sup>155</sup> Killie Campbell Library, Ms. NAT. 5.09, 2536, C. Parsons to P. Paterson, 12 June 1869.

Living molluscs and arthropods in the bay and along the coast were also preyed upon by humans. Crayfish, mussels, crabs, oysters and shrimps were plentiful throughout the period under discussion.<sup>156</sup> They were caught to provide food for the white inhabitants of Durban. During the 1850s and 1860s a few Africans caught shellfish and hawked them around the town,<sup>157</sup> some white fishermen also sold shellfish, for in 1865 an oyster shop was opened.<sup>158</sup> The fishing law of 1867 made some attempt to control this activity by making a licence costing 10s necessary for shrimp fishing. It seems likely that this financial burden would have discouraged Africans from continuing in the trade. Despite this exploitation by humans, there is no evidence to suggest that the supply of shellfish had been adversely affected by 1870.

### Summary

During the early years of British rule in the Colony, Durban remained a small settlement of traders. These few white settlers cleared bush to build their houses, used local vegetation for thatching, building material and domestic fuel, preyed on animals for food and sport, and frightened off other animals in the process. However, because there were so few people at the bay until about 1850, it seems unlikely that the changes they made in the environment were very evident.

From the early 1850s onwards, the population of the town increased rapidly and the effects of exploitative human activity became more noticeable. This was partly because the demands made by the bigger population were far heavier, so that the scale of exploitation increased, but also because the range of human demands on the environment grew. The changes which the settlers caused will be summed up first in relation to the landscape, then the flora, and lastly the fauna.

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<sup>156</sup> The Natal Times, 9 April 1852; Natal Mercury 18 December 1866; Blue Book 1861, p. 303.

<sup>157</sup> Blue Book 1856, p. 315; Blue Book 1865, p.Y 9.

<sup>158</sup> Natal Mercury, 16 February 1865.

After twenty-five years of colonial rule the landform of Durban showed several signs of settler activity. Perhaps the most obvious change would have been through the drainage of the western and eastern vleis to allow for the physical spread of the town to grow. The demand for stone for the growing port had caused quarries to be opened up and worked: the first quarries used were on the Bluff, but as the need for stone for buildings and public works such as roads, pavings and the harbour works grew during the 1850s and 1860s, new surface features were exposed at several sites within the borough. Of all these sites, the most noticeable in 1870 would have been the Mngeni quarry, for the government had the capital to finance the labour and technology required to shift large quantities of stone. The shoreline of the bay side of the Point was more firmly established, while the entrance to the bay was deeper: this had been effected by 1855. The marine side of the Point looked much as it had in 1845, except that the two unfinished piers extended from it.

The natural vegetation had been much interfered with. The settlers had introduced Australian prairie grass and, indirectly, the burr weed. They had destroyed much of the indigenous bush as residential sites were cleared and fuel cut. The demand for fuel had become heavier over the years, not only because of the growing urban population, but also because of the development of fuel-burning industries. This fuel was cut from the coastal bush and the mangrove swamps. While it cannot be estimated to what extent human exploitation had diminished the bush cover, we do know that by 1870 most of the mangrove trees that had once formed a dense growth around the bay had been cut down so that few trees remained standing. The need for timber for buildings, wagons and furniture had led to such exploitation of the forests around Durban that not only had the forest cover been reduced, but also the forest composition had been altered by the selective felling of those species which were in demand. Although the colonial government and the Durban Town Council attempted to control the destruction of the bush, mangrove swamps and timber forests through restrictive laws and regulations because of the lack of officers to enforce the regulations the exploitation of the flora continued. The appointment in 1872 of a forest conservator for the bay reflected that the government was at last financially able to take practical steps towards protecting some of Natal's natural resources.

The faunal resources of the bay area had clearly been both diverse and vast in 1845. Early settlers had had unrestricted access to these resources; they were therefore able to eliminate those species they feared, while preying on others for food and sport. As a result, over a period of twenty-five years they destroyed large numbers of animals and reduced the number of species found there. Their freedom in this regard ended with the introduction of legislation and municipal regulations in the late 1860s which imposed restrictions on fishing and hunting. While the fish and shellfish resources seem to have been unaffected by settler exploitation up to 1870, it was evident that the Durban area was no longer 'the sporting field it was in the good old days when elephants browsed on the flat',<sup>159</sup> for the birdlife and game had diminished most markedly.

Some of the changes caused by man were evident to the government and colonists. Where these were disadvantageous to the whites, as in the destruction of valuable resources, steps were taken to control the destruction. The government promulgated laws to protect timber, fish and game. The Town Council took control of the town lands; it also made regulations concerning the exploitation of fauna and flora in the municipal area, although it provided no effective means to ensure its regulations were obeyed. Despite these attempts to control the exploitative activity of the settlers, the environment of Durban was much altered by 1870.

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<sup>159</sup> *Ibid.*, 3 May 1866.



CHAPTER 4THE COASTLANDSChanges in forces acting on the environment

The coastal area under consideration stretched from the Thukela River in the north to the Mthamvuna River in the south. It extended inland through a coastal strip about 16 kilometres (10 miles) wide and the coastal hinterland of about 30 kilometres (19 miles). During the period under discussion, the coastlands were demarcated into four counties, each of which will now be discussed below.

The area from north of the Mngeni to the Thukela River became Victoria County, covering 383 838 hectares (1 482 square miles).<sup>1</sup> The earliest white settlers established themselves in 1846, just north of the Mngeni, where they experimented with cotton growing. Later, through the settlement schemes, a group of Wesleyans established the small village of Verulam on the south bank of the Mdlothi River, about 32 kilometres (20 miles) from Durban. It became the seat of a magistracy and the centre of the county in 1852. As more white farmers moved into Victoria County the white population grew to about 370 by 1855. The African population by then was estimated at about 19 000,<sup>2</sup> with much of it living within the Umvoti, Inanda and Tugela locations. Large parts of these fell within the county limits. In the 1860s Indian labourers were brought in to work on the sugar plantations so by 1870 the total population of the county was roughly 1 500 whites, 3 000 Indians and over 50 000 Africans.<sup>3</sup>

Durban County, which stretched from the Mngeni River to the Mkhomazi River, covered about 77 182 hectares (298 square miles) which included the townlands of

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<sup>1</sup> Robinson, Notes on Natal, p. xi.

<sup>2</sup> Blue Book, 1855, p. 244.

<sup>3</sup> Ibid., 1870, p. R 4.

Durban.<sup>4</sup> In the immediate hinterland of Durban white settlement began in 1848. Jonas Bergtheil organised a party of German immigrants to come to Natal and settle on several farms to the west of Durban. Not all 47 families chose to stay on but those who did formed the nucleus of the New Germany community. Nearby, on the road between Durban and Pietermaritzburg, the village of Pinetown was laid out in 1850. To the south of Durban, most of the area between the Mlazi and the Mkhomazi rivers was included in the Umlazi Location, established in 1847. In 1855 the population of the county, exclusive of the borough, was 610 whites and 11 575 Africans;<sup>5</sup> by 1870, again exclusive of the borough, it was 1 500 whites, 1 206 Indians and 17 382 Africans.<sup>6</sup>

Only a handful of whites lived south of the Mkhomazi in the 1840s, farming cotton and cattle. Their numbers grew very slowly in the 1850s and 1860s. This was partly because access to the area was made difficult by the numerous unbridged rivers, but also because large areas of the coastlands had been allocated for mission purposes. Between the Mkhomazi and the Mzimkhulu, about 12 150 hectares (30 000 acres) had been set aside. This meant that the settlers who established themselves in the area that came to be called Alexandra County were cut off from commercial centres by intervening areas of reserves. In the opinion of a settler, 'this interval of barbarised country has been a barrier to the industrial advancement of the whole district'.<sup>7</sup> For settlers living to the north of Durban the situation was different. There, the coastal tract had no locations in it until the Mvoti was reached. White settlement of the south coast consequently lagged far behind that of the north; by 1855 there were only 85 whites and just on 13 000 Africans living there.<sup>8</sup> The only established village in the county by 1870 was Umzinto, which had been the seat of the magistracy until 1857, when it was moved and became Lower Umkomazi Magistracy, before being moved back to Umzinto in 1865. The town

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<sup>4</sup> Robinson, Notes on Natal, p. xi.

<sup>5</sup> Blue Book, 1855, p. 244.

<sup>6</sup> Ibid., 1870, p. R 4.

<sup>7</sup> Robinson, Notes on Natal, p. 138.

<sup>8</sup> Blue Book, 1855, p. 244.

of Scottburgh had been laid out in 1860 but for many years remained undeveloped. In Alexandra County, which covered 414 400 hectares (1 600 square miles),<sup>9</sup> by 1870 the population was 411 whites, 411 Indians and 18 000 Africans.<sup>10</sup>

In January 1866 an area of 388 500 hectares (1 500 square miles)<sup>11</sup> between the Mzimkhulu and the Mtamvuna Rivers was annexed to Natal. It was named Alfred County, with the magistracy being set up at Murchison, about 16 kilometres (10 miles) inland from the mouth of the Mzimkhulu River. By 1870 there were 94 whites and 15 178 Africans living in the county.<sup>12</sup>

Between 1845 and 1870 the predominant settler productive activity in the coastlands was farming. The first crop that farmers experimented with was cotton. A few cotton farmers established themselves north of Durban in 1846, while the people of the New Germany community also tried farming cotton. These cotton growing schemes failed because of erratic yields and improper cultivation.<sup>13</sup> The people of New Germany took to market gardening instead and by 1870 they supplied Durban with the greater part of its vegetables.<sup>14</sup>

During the 1850s farmers to the north of Durban and in Durban County tried a variety of cash crops in their search for a staple agricultural product to export. The most important crops they experimented with were arrow-root, indigo, cotton, coffee, tea and sugar-cane. Arrow-root, used to provide a natural starch, was a popular crop from the mid-1850s, for the productive process was simple. There was no great demand for it in Britain, however, and after about 1860 production fell off as it was no longer

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<sup>9</sup> Robinson, Notes on Natal, p. xi.

<sup>10</sup> Blue Book, 1870, p. R 10.

<sup>11</sup> Robinson, Notes on Natal, p. xi.

<sup>12</sup> Blue Book, 1870, p. R 10.

<sup>13</sup> Hattersley, The British Settlement of Natal, pp. 93-6.

<sup>14</sup> Mohr, To the Victoria Falls of the Zambezie, p. 45.

remunerative.<sup>15</sup> Indigo was cultivated from the mid-1850s as well, but none was ever exported, for the invention of synthetic dyes in the mid-1860s ruined any potential market for Natal indigo.<sup>16</sup> The most profitable crops were coffee, maize and sugar-cane. In the late 1850s coffee growing seemed successful, but by the early 1860s productivity decreased because pests attacked the plants. This problem had been overcome by the late 1860s and productivity increased.<sup>17</sup>

It was sugar that became a major agricultural export from Natal necessitated by the small size of the domestic market; it was exported mainly to the Cape.<sup>18</sup> From a few Mauritian cultivars in 1848, cultivation of the crop increased rapidly during the 1850s so that by 1859, 1 620 hectares (4 000 acres) were under cultivation in Victoria and Durban Counties and a small area in Alexandra County.<sup>19</sup> By 1866 the industry had shown enormous growth, so that the area under cultivation had more than tripled. There were 5 172,29 hectares (12 781 acres) under sugar-cane in Durban, Victoria and Alexandra Counties, with the latter having only 477 hectares (1 178 acres) of this total under cultivation.<sup>20</sup> This rapid growth of the industry enabled sugar and wool (from upcountry) to become the backbone of the Natal economy in the 1860s since the combined values of these two exports far exceeded that of all others put together.

According to Richardson, it was a combination of factors that enabled the rapid growth of the sugar industry. These included favourable prices, low wages, a protective tariff structure and a partially controlled labour market. He argues that the government was prepared to construct protective tariffs for the sugar industry for both financial and political reasons, whereas the state's intervention in the labour market stemmed from its

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<sup>15</sup> Hattersley, The British Settlement of Natal, p. 232.

<sup>16</sup> *Ibid.*, p. 232.

<sup>17</sup> *Ibid.*, p. 234.

<sup>18</sup> Richardson, 'The Natal sugar industry', in Guest and Sellers (eds.), Enterprise and Exploitation, p. 189.

<sup>19</sup> Blue Book, 1859, p. 266.

<sup>20</sup> Blue Book, 1866, p. X 3.

inability to 'destroy the existing mode of production among African producers in the 1850s'.<sup>21</sup> It therefore became necessary to import labour for the cash crop farmers, so the government promoted Tsonga and Indian immigration. In the long term, the immigration of indentured Indian labourers was more significant to the industry. Between 1860 and 1866 a total of 6 445 Indian men, women and children arrived in Natal,<sup>22</sup> where the labourers were to be indentured for five years. These Indian immigrants provided labour to assist in all the cash crop farming of the coastlands.

On their estates the sugar farmers of Natal adopted the plantation system which involved both agricultural and industrial processes. They cultivated and harvested the cane, then crushed it and treated the juice in the mills on their private properties. As Richardson points out, the efficiency of the mills increased sharply as capital became invested in their crushing and boiling capacity; by 1864, only four of the sixty mills in operation were not steam-driven. Further improvements in mill technology included the introduction of wetzel pans and centrifugals in 1865, which improved the overall recovery rate from the juice.<sup>23</sup> Sugar farmers therefore made heavy capital investments in the technology of their mills.

With the development of cash crop agriculture in the coastlands, the government needed to improve the system of roads so that the transport of crops to the port could be speeded up. In the early 1850s, farmers to the north of Durban petitioned for improvements in the north coast road,<sup>24</sup> while some embarked on road-making themselves.<sup>25</sup> In addition, wealthy Durban businessmen of the settler elite such as Edward Snell, William Hartley and Hugh Gillespie, who all owned property in Victoria

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<sup>21</sup> Richardson, 'The Natal sugar industry', p. 184.

<sup>22</sup> J. Brain, 'Indentured and free Indians in the economy of colonial Natal', in Guest and Sellers (eds.), *Enterprise and Exploitation*, p. 202.

<sup>23</sup> Richardson, 'The Natal sugar industry', p. 186.

<sup>24</sup> S.G.O. 111/1/8, p. 149, memorandum of residents between the Rivers Umgeni and Umshlanga, 2 July 1853.

<sup>25</sup> Robinson, *Notes on Natal*, p. 7.

County, used their political influence in attempts to improve communications between Durban and the north coast.<sup>26</sup> Because some of the wealthy planters became members of the Legislative Council, they had the political power to promote their interests. James Saunders, for example, was one of the prime movers behind the building of the Queen's Bridge across the Mngeni in 1864.<sup>27</sup> Although it was washed away in the flood of 1868, it had proved to be an essential link with the north coast. Down south where the white population was far smaller and economic development was far slower than in the north, the bridging of the Mbilu and Mlazi Rivers did not occur until the late 1860s.

During the period under discussion, some of the Africans of the coastlands became involved in economic experiments, aimed at producing a saleable surplus. The government attempted to induce Africans to cultivate cotton in the late 1850s, and some living down the south coast tried it for a few years.<sup>28</sup> However, the soil of Natal proved unsuitable for this crop.<sup>29</sup> Far more successful were the efforts of the mission station *kholwa* to grow sugar cane. In 1860, the Umvoti Mission on the north coast gained financial support from the government for an experimental plantation, with the government paying for a mill, while the *kholwa* produced the raw cane. This co-operative, entrepreneurial venture flourished so that by 1870 there were nearly 50 hectares (120 acres) of cane growing.<sup>30</sup> Encouraged by the success of the Umvoti Mission, the American mission at Amanzimtoti launched a similar scheme, which in turn inspired one at the American mission on the Ifumi, and the Methodist mission at Verulam.<sup>31</sup>

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<sup>26</sup> Bjorvig, 'Durban 1824-1910', pp. 239-40.

<sup>27</sup> Goetzsche, Father of a City, p. 170.

<sup>28</sup> S.N.A. 1/3/7, no. 138, H.F. Fynn to T. Shepstone, 4 October 1858; S.N.A. 1/1/10, no. 26, R. Struthers to T. Shepstone, 28 March 1860.

<sup>29</sup> N.Etherington, 'African economic experiments in colonial Natal. 1845-1880', in Guest and Sellers (eds.), Enterprise and Exploitation, p. 269.

<sup>30</sup> Blue Book, 1870, p. X 6.

<sup>31</sup> Etherington, 'African economic experiments'. p. 269.

The white population of the coastlands was concentrated in Durban and Victoria Counties; the records of the period therefore tend to concern the northern sector of the coastlands more than the southern. But they are not numerous, so no detailed study of settler activity is possible. Only the barest outline of their impact on the environment can be given.

### **Effect of human activity on the landform and mineral resources**

The settlers made little change to the landform of the coastal region during the period under discussion. Not only were the towns of the coastlands small, but they also included no features that had involved major excavations, drainage or quarrying activities. The few alterations to the landform that were made concerned the mining of a seam of coal on the north coast; the opening up of several, small quarries on farms throughout the coastlands; and the improvements in the infrastructure through road-building and the attempt to make the mouth of the Mkhomazi River navigable to small craft. The government also prospected marble beds down the south coast but did not exploit them at all.

In the early 1850s a few settlers were involved in mining a seam of coal on the farm Compensation, about 48 kilometres (30 miles) north of Durban.<sup>32</sup> Boring activities were begun, but by June 1851 the work had already been stopped some months because of the lack of labour.<sup>33</sup> A government surveyor examined the deposits in July 1852, sending six wagonloads to Durban for trial on a mailsteamer. In his report he noted that coal from the vein was used as fuel in the smithy at Compensation.<sup>34</sup> This shows that there was some local exploitation of the resource. The quality of the coal, however, proved inferior so by 1854 the mine was no longer worked.<sup>35</sup> Boring was recommenced in 1861 and

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<sup>32</sup> N.A.D. Acc. no. 254, Reminiscences of G. Lamond, p. 11.

<sup>33</sup> Child, A Merchant Family in Early Natal, p. 24.

<sup>34</sup> N.A.D. Bird Papers, John Bird paper, J. Bird to Acting Surveyor-General, 27 July 1852.

<sup>35</sup> Blue Book, 1854, p. 256.

continued sporadically until later in the decade.<sup>36</sup> As no figures are available on the total quantity of coal mined from 1850 onwards the extent of exploitation cannot be judged.

Stone-quarrying activities were carried out by several north-coast farmers on their estates for stone to use on their farms. While the scanty records of the 1850s made no mention of such quarries in the Blue Books, it seems likely that farmers would have used workable outcrops of good stone during that decade. Certainly the fuller records in the Blue Books of the 1860s do mention private quarries.<sup>37</sup> In the Tugela Division of Victoria County, for example, there were fourteen stone quarries in use in different parts of the county in 1865, while in Durban County there were many sandstone quarries, although they were not always worked.<sup>38</sup> The only official record of the quantity of rock quarried concerns a property at the Little Mhlanga, where about 71 tonnes (70 tons) of stone were removed from the quarry during 1866.<sup>39</sup> Some farmers may have derived capital gain from their quarries as the government had to be supplied with stone for roads and the occasional weir.<sup>40</sup> It would seem likely then that road-making activity and quarrying would have altered the landform in places, although the extent or exact location of these changes cannot be discussed because of the lack of records.

To the south of Durban, where white settlement occurred later than on the north coast, it was only in the 1860s that any landform changes were effected. The commercial farmers who settled there, faced with the slow and expensive land carriage of their goods to Durban, made representation to the government for a harbour to be built on the south coast.<sup>41</sup> Presumably because these sugar farmers were so important to the Natal economy the government despatched the Colonial Engineer to survey the south coast in

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<sup>36</sup> Ibid., 1861, p. 307; Ibid., 1865, p. 12.

<sup>37</sup> Ibid., 1861, p. 306; Ibid., 1862, p. Y 8; Ibid., 1868, p. Y 24; Ibid., 1870, p. Y 12.

<sup>38</sup> Ibid., 1865, pp. Y 8, Y 12.

<sup>39</sup> Ibid., 1866, p. Y 22.

<sup>40</sup> Robinson, Notes on Natal, p. 24.

<sup>41</sup> For all information in this paragraph see G.H. 1216, no. 133, R. Keate to the Duke of Buckingham and Chandos, 9 December 1868.



1862. He duly reported on the suitability of the mouth of the Mkhomazi River as a harbour, so over the next few years the government carried out harbour works there designed to straighten and deepen the channel, and direct the outflow. This involved blasting away some of the rocks blocking the channel, then building a training wall of mangrove wood and rubble into the sea on the south side. The work was completed in 1864. Although it appeared to make little improvement to the navigability of the river,<sup>42</sup> it is possible that the pier stabilized shifting sand at the mouth thereby modifying natural changes there.

In the mid-1860s the government was made aware of the existence of marble beds on the south coast. Stretching over an extensive area, they lay about 5 kilometres (3 miles) inland from the mouth of the Mzimkhulu River.<sup>43</sup> The Surveyor-General inspected the marble, forwarding samples of it to Britain,<sup>44</sup> but the government did not utilize this resource, presumably because of the difficulties of transporting blocks of marble. It is likely, however, that any settlers living in the vicinity of the beds would have quarried small blocks of marble for their own use.

### **Effect of human activity on the flora**

The vegetation of the coastlands consisted of several district regions. There was a coastal strip of evergreen dune forest, with the characteristic canopy tree being the red milkwood. Behind the dune forest lay the coast forest, with white stinkwood, white pear, essenwood, ironwoods of different species, yellowwood, Natal mahogany and white milkwood, among others, as canopy trees. Interspersed between forested areas were palm belts where the Natal fig and wild banana could be found, as well as *Acacia* spp. in dry areas. Behind the coastal belt lay the coastal hinterland, consisting of flat-topped ridges covered in wooded grassland, with *Acacia* spp, commonly referred to as mimosa by the settlers, predominating.

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<sup>42</sup> Robinson, Notes on Natal, p. 107.

<sup>43</sup> Blue Book, 1866, p. Y 25; Ibid., 1867, p. Y 25.

<sup>44</sup> G.H. 1215, no. 14, J. Bisset to E. Cardwell, 1 February 1866.

The settlers increased the number of species of flora found in the coastlands by introducing economically important crops. The food-producing plants they brought in included sugar-cane, vegetables, arrowroot, coffee, tea, oats, barley, and fruits such as oranges, pawpaws, bananas and pineapples.<sup>45</sup> Other plants introduced, which were not food-producing, were cotton, indigo and tobacco. Experimentation with the cultivation of these crops occurred in the 1850s in Durban and Victoria Counties.

Between 1850 and 1870 the settlers further altered the flora by destroying much indigenous vegetation. In the first place they needed fuel for domestic purposes. As the total white population of all three counties by 1870 was just over three thousand, and they were spread out over a vast distance, their exploitation of coastal bush for domestic fuel could not have had any deleterious effect on the bush.

However, they and their labourers cleared many hectares of bush to make way for the cultivation of the crops with which they experimented. The area cultivated by the settlers in the coastlands extended rapidly from a total of 1 613 hectares (3 984 acres) in 1856 (excluding Lower Umkomazi),<sup>46</sup> to 9 174 hectares (22 653 acres) in 1866.<sup>47</sup> As it cost £2 in the mid-1860s,<sup>48</sup> to clear each .405 hectare (1 acre) it is clear that this expense must have made a sizeable inroad into the farmers' income.

The settlers also felled bush to provide fuel for manufacturing processes, especially for the sugar industry. No estimate could be found of the quantity of fuel needed for a sugar-mill per month. However, it is obvious that as more sugar-mills were brought into operation the demand for fuel increased. Despite the quantity of bush along the coast, on the south coast in about 1870 fuel was reckoned 'a dear and scarce article', at about

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<sup>45</sup> N.A.D. Bird Papers, Reminiscences of W.H. Middleton; N.A.D. Bird Papers, Reminiscences of W. Lister; N.A.D. Moreland Papers, Journal of the topography, fauna and flora of Natal, 1853, pp. 303-12.

<sup>46</sup> Blue Book, 1856, p. 310.

<sup>47</sup> Ibid., 1857, pp. X 2-3.

<sup>48</sup> C. Hamilton, Sketches of Life and Sport in South-East Africa (London, 1870), p. 150.

£1 per tonne (per ton).<sup>49</sup> By then, there were 7 sugar-mills operating in Alexandra County, 13 in Durban County and 39 in Victoria County.<sup>50</sup> These figures exclude the mills operated by Africans on the mission stations. So, for sugar-mills alone, the amount of fuel cut in Victoria County far exceeded that cut in the other two counties. Certainly, before 1878 the quantity of mimosa trees that had been felled for fuel in Victoria County was described as 'enormous'.<sup>51</sup>

Further exploitation of the flora included settlers felling trees for timber. The records of this activity are very scarce indeed. Presumably every settler family used local timber such as red milkwood for housing and yellowwood for making furniture,<sup>52</sup> but few people recorded the fact. Sneezewood was used for posts standing in the open as it withstood being wet, while stinkwood was prized for furniture.<sup>53</sup> Settlers on the south coast could rough-hew the local timber themselves, but they had to obtain planking, at a considerable cost, from Durban.<sup>54</sup> This was because there were no sawmills in the south. They were free to fell timber from their own properties, but as from 1853 they needed a licence to fell it from Crown land. Unfortunately, no returns of people being granted sawyers' licences in Victoria, Durban and Alexandra Counties are available although the Forest Commission noted that by 1878 several stands of good timber had been damaged by licensed sawyers in Victoria County.<sup>55</sup> Inevitably, unlicensed tree-felling also occurred, for wagon-makers were in the habit of 'plundering Crown lands and private property in a reckless and indiscriminate way'.<sup>56</sup> As this evidence was presented to the Forest

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<sup>49</sup> Robinson, Notes on Natal, p. 100.

<sup>50</sup> Blue Book, 1870, pp. Y 5, 6, 12, 14, 16, 18, 20, 22.

<sup>51</sup> Report of a Commission on...Extent and Condition of Forest Lands in the Colony (Pietermaritzburg, 1880), p. 16.

<sup>52</sup> Child (ed.), Portrait of a Pioneer, pp. 35, 50; Mann, Colony of Natal, p. 154.

<sup>53</sup> *Ibid.*, pp. 155-6; N.A.D. Acc no. 294, Reminiscences of C. Arbuthnot.

<sup>54</sup> Child, Portrait of a Pioneer, p. 50.

<sup>55</sup> Forest Commission, p. 16.

<sup>56</sup> *Ibid.*

Commission in 1878 we cannot be certain when the destruction occurred. Wagons, however, were a common form of settler transport so it seems likely that the felling of timber suitable for wagon-making, occurred throughout the period under discussion. The timber most commonly used for wagons included red milkwood, white pear, yellowwood, white ironwood, essenwood and flat crown (*Albizia adianthifolia*).<sup>57</sup> As these are all canopy trees, their removal from the forests would have altered the forest composition and exposed the sub-canopy layer, to its detriment.

As the destruction of forests in Alfred County is better documented, it can be discussed in greater detail. In 1866 there were eight forests in the county, with the main ones being the Ngeli forest on the slopes of the Zuurberg and the Mpetyne in the upper basin of the Mthamvuna River. The predominating trees in these forests were several species of yellowwood, essenwood, ironwood, Natal wild pear, sneezewood and stinkwood.<sup>58</sup> As Alfred County was annexed to Natal only in 1866, the timber legislation of 1853 did not apply to the area, so a few white sawyers took the opportunity to fell timber there in 1866. They operated a hand-driven pit in the coastal forest, and four in the Ngeli forest. According to the official statistical returns of the Colony, these sawyers were able to produce 3 601 cubic metres (127 200 cubic feet) of timber per annum, valued at £1 108.<sup>59</sup> As these saws were unlicensed, the government was losing a potential source of revenue. Accordingly, in January 1867 the Acting Attorney-General suggested that a proclamation be drawn up as to the terms and conditions of granting licences in Alfred County. He also recommended that in the meantime the Resident Magistrate stop all wood-cutting by unlicensed people.<sup>60</sup> The required proclamation was duly drawn up and published in the Government Gazette on 5 March 1867. This stipulated that a written licence from the Resident Magistrate was necessary for the cutting of timber, bush, firewood, poles and wattles from Crown land. A licence fee of £1 per month had to be paid for every

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<sup>57</sup> See Appendix 1.

<sup>58</sup> D.P. McCracken, 'The indigenous forests of colonial Natal and Zululand', Natalia no. 16, 1986, p. 23.

<sup>59</sup> Blue Book, 1866, p. Y 24.

<sup>60</sup> A.G.O. 1/10/1, p. 488, H. Cope to Lieutenant-Governor, 7 January 1867.

saw, hatchet, axe or any other cutting instrument used on Crown land.

Over the next few years the number of saws being operated by licensed sawyers gradually increased, so that by 1868 there were nine saws in use.<sup>61</sup> By the end of that year the total amount of timber cut since 1866 was 9 231 cubic metres (326 000 cubic feet), valued at £2 512.<sup>62</sup> Because of the distance of the forests from the seat of the magistracy at Murchison, the activity of the sawyers was not watched closely. About once every three months the constable visited the sawyers, and the clerk of the Resident Magistrate inspected their licences every year. Otherwise the sawyers were left to themselves. As a result, there was probably much illegal felling of timber by people coming in from the Kokstad area of East Griqualand. In addition, the sawyers caused 'a great deal of waste and wanton destruction of young timber' by cutting roads to their saw pits.<sup>63</sup> Because of the concern of the Resident Magistrate over this, the government appointed a forest conservator to the Alfred County in 1872; he was to be paid £12 a year for discharging his duties.<sup>64</sup> As McCracken has pointed out, the 'poor returns and inaccessibility combined to make the Alfred forests diminish more slowly than those nearer the capital'.<sup>65</sup>

Africans in all four counties denuded the indigenous vegetation through the clearings they made in the forests for gardens, and through cutting saplings for fencing and hut-building. They also took their fuel from the forests.<sup>66</sup> In addition to these activities, to the south of Durban in the early 1860s, Africans felled good timber that they sold in the

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<sup>61</sup> Blue Book, 1868, p. Y 24.

<sup>62</sup> Ibid., 1866, p. Y 24; Ibid., 1867, p. Y 24; Ibid., 1868, p. Y 24.

<sup>63</sup> C.S.O. 389, R 1596, H. Shepstone to Colonial Secretary, 24 July 1871.

<sup>64</sup> Blue Book, 1872, p. M 40; C.S.O. 420, R 1889, H. Shepstone to Colonial Secretary, 1 October 1872.

<sup>65</sup> McCracken, 'The indigenous forests of colonial Natal and Zululand', p. 27.

<sup>66</sup> Forest Commission, pp. 16-7.

town as wagon wood.<sup>67</sup> Much of this came from the vegetation in the Umlazi Location. As this land was put in the hands of the Natal Native Trust in 1864, no field cornet had the power to apprehend the offenders in the location.<sup>68</sup> In 1869 the Surveyor-General informed the Lieutenant-Governor that Africans had caused extensive damage to the forests on the Crown lands and in the locations in Alexandra and Alfred Counties. He urged the government to take steps to protect the forests.<sup>69</sup> The government responded by placing the forests of the Umlazi Location in the care of the Rev. A. Tönnesen, an Anglican missionary living in the location. He alone could give permission to anyone to cut and remove timber.<sup>70</sup> In theory, at least, this appointment of a forest conservator should have helped reduce the exploitation of the Umlazi forests.

### **Effects of human activity on the fauna**

The coastlands provided numerous habitats such as the rocky pools of the coastline, the sea and the numerous rivers, the wetlands, the coastal forest and the grassy flats for a wide variety of animals. Over the years, settlers and Africans killed off the game in the coastlands as food for themselves, to protect their property, to provide trade goods and for sport. Although the records are frequently too scanty for us to be sure of the reason for the destruction, the result of it was clear. This change in the faunal population will now be discussed following the same pattern as for the Durban chapter.

Carnivorous animals such as lion, leopard and hyena were all found in the coastlands in the early 1850s,<sup>71</sup> and were hunted down by the settlers because of the damage they caused. By 1856 there were few lion left, and leopard were found only occasionally,

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<sup>67</sup> Natal Mercury, 3 October 1862.

<sup>68</sup> S.N.A. 1/1/14, no. 78, P.C. Sutherland to T. Shepstone, 20 September 1864.

<sup>69</sup> S.N.A. 1/1/19, R 2497, P.C. Sutherland to Colonial Secretary, 24 September 1869.

<sup>70</sup> Natal Witness, 29 July 1870.

<sup>71</sup> N.A.D. Bird Papers, Reminiscences of J. Polkinghorne; N.A.D. Bird Papers, Reminiscences of W. Lister; Humphreys, The Journal of William Clayton Humphreys, pp. 3, 21.

although they could still be hunted south of the Mkhomazi.<sup>72</sup> Even so, on the north coast, where white settlement was denser than down south, it seems that leopard were enough of a menace to the whites for large hunts (about 50 white hunters and about 200 Africans) to be called up in the late 1850s.<sup>73</sup> By the mid-1860s these animals were seldom seen in the coastlands any more.<sup>74</sup> Similarly, crocodiles gradually decreased as they were intensively hunted by the whites.<sup>75</sup>

With the introduction of the Noxious Animals Law in 1866 the number of leopard, wild cats, hyena and crocodiles continued to decrease as rewards were paid out by resident magistrates for their destruction. As a result, by 1867 the Natal Almanac claimed that there were few leopard and hyena in the Colony, and that jackal were being exterminated 'pretty completely'.<sup>76</sup> According to the available records, in 1867 bounties were paid out for 15 leopard in the coastal counties,<sup>77</sup> which shows that although leopard were not as common as they had once been they were still to be found there. Africans who also hunted leopard, hyena and wild cats<sup>78</sup> were encouraged by the reward scheme to intensify their efforts; in July 1868, for example, nearly all the recipients of the rewards paid out in Alfred County and Alexandra County were Africans.<sup>79</sup>

There are not many records for this period of the big herbivores such as buffalo, hippopotamus and elephant. Those that do exist seldom indicate whether the animals were killed for food, for sport, or for commercial profit. It is only possible therefore to

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<sup>72</sup> W.H.I. Bleek, The Natal Diaries of Dr W.H.I. Bleek 1855-1856 trans. and ed. O.H. Spohr (Cape Town, 1965), p. 41.

<sup>73</sup> J. Windham, 'The Natal Diaries of Mrs J. Windham', (Typescript, n.d.), p. 294.

<sup>74</sup> Hamilton, Sketches of Life, p. 136.

<sup>75</sup> *Ibid.*, p. 227.

<sup>76</sup> Natal Almanac, 1867, p. 215.

<sup>77</sup> Natal Herald, 14 February, 21 March, 12 April, 16 May 1867.

<sup>78</sup> Mann, Colony of Natal, p. 102; Grout, Zululand, p. 291.

<sup>79</sup> Natal Herald, 16 July 1868.

note how their numbers decreased, without being able to give the reason other than that white and African hunters killed them.

North of Durban, herds of buffalo were a common sight in the early 1850s, particularly in the forests on the Mngeni, Mvoti and Thukela rivers.<sup>80</sup> They were hunted by both white settlers and Africans.<sup>81</sup> By the early 1860s there seem to have been few herds left and those were 'very wild and dangerous to approach, having been so much hunted'.<sup>82</sup> Down south, buffalo seem to have been seen more frequently than in the north, even in the mid-1860s. For example, at Ifafa in May 1864, there was to be a 'grand hunt' after buffalo;<sup>83</sup> whether the hunt was so termed because of the number of participants or because of the hopes of a large bag was not indicated in the record. Under the Game Law, buffalo became protected during the breeding season, but it would appear that by then there were few left to be protected in the coastal counties.

Hippopotamus and elephant were both found in the coastlands in the 1850s,<sup>84</sup> so there were still opportunities for the whites to shoot them for ivory. Such an incident occurred up the north coast in the mid-1850s, when a herd of about 30 elephant was pursued by some settlers.<sup>85</sup> Although ivory was exported from Natal throughout the period under discussion, the origin of the ivory was never made clear in the records, so the contribution from Natal itself is unknown. It seems reasonable to assume, however, that some ivory was obtained by white and black hunters in the coastlands during the 1850s. Elephant were also killed as a food source by Africans, such as those living near the

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<sup>80</sup> N.A.D. Acc. no. 254, Reminiscences of G. Lamond; N.A.D. Bird Papers, Reminiscences of J. Polkinghorne.

<sup>81</sup> Humphreys, *Journal*, p. 5.

<sup>82</sup> A.A. Anderson, *Twenty-five Years in a Waggon* (London, 1888., repr. Cape Town, 1974) p. 18.

<sup>83</sup> Child, *Portrait of a Pioneer*, p. 4.

<sup>84</sup> Drayson, *Sporting Scenes*, pp. 63-4; *Natal Mercury*, 11 July 1855.

<sup>85</sup> J. Shooter, 'Off to Natal by A Clergyman's Wife', (Typescript, n.d.), p. 161.



Mvoti River in the early 1850s,<sup>86</sup> but we have no records as to how frequently this may have occurred. By about 1863 elephant were seldom seen in Natal, and hippopotamus were described as 'becoming extinct',<sup>87</sup> although they were shot occasionally on both the north and south coast during the 1860s.<sup>88</sup> It seems surprising, given the way the whites had exploited hippopotamus, that in 1870 there was still a small herd of them in the Sea Cow Lake just north of Durban.<sup>89</sup>

Of the antelope species, bushbuck, duiker, oribi and reedbuck were all described as being numerous in the coastlands in the 1840s<sup>90</sup> and early 1850s.<sup>91</sup> On the north coast they were hunted in the 1850s by both white settlers<sup>92</sup> and Africans<sup>93</sup> as a source of food. While there are very few records of this activity, the effect of it was soon noticeable for by 1858 a resident north of the Mhlali River noted that 'Buck are hereabouts not so common as they used to be'.<sup>94</sup> Certainly, the fact that the animals listed under the Game Law to receive protection during the breeding season included bushbuck, duiker, oribi, reedbuck and buffalo, suggests strongly that these animals needed protection because their numbers had diminished significantly.

Down the south coast, where there were fewer white settlers to kill buck for food, blue duiker were still found in 'great abundance' near the Mkhomazi River, and 'large

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<sup>86</sup> Humphreys, Journal, p. 20.

<sup>87</sup> Anderson, Twenty-five Years in a Waggon, p. 18.

<sup>88</sup> Natal Mercury, 28 March 1861; Hamilton, Sketches of Life, p. 214; Child, Portrait of a Pioneer, pp. 4, 40.

<sup>89</sup> Robinson, Notes on Natal, p. 5.

<sup>90</sup> Drayson, Sporting Scenes, pp. 59-61.

<sup>91</sup> Humphreys, Journal, p. 6.

<sup>92</sup> Windham, 'The Natal Diaries', p. 272.

<sup>93</sup> Humphreys, Journal, p. 5.

<sup>94</sup> Windham, 'The Natal Diaries', p. 281.

numbers' were shot in 1864.<sup>95</sup> That buck were clearly an important foodstuff for settler families is shown in the case of a family of ten, at the Ifafa, where two sons were fully employed in shooting game to supply the family with food.<sup>96</sup> Even further south, near the Mzimkhulu, buck seemed to be more numerous for it was possible to shoot seven in an afternoon in 1866.<sup>97</sup> While there is little doubt that antelope numbers in the coastlands were greatly reduced by 1870, duiker could still be found in the cane fields on the north coast.<sup>98</sup>

Under the Game Law, many species of buck were protected during the breeding season. The law applied to all people in Natal, whether black or white, but some of the Africans of the coastlands traditionally relied on hunting buck for food,<sup>99</sup> so they continued to hunt after the law was introduced. The local papers featured complaints from the white settlers of Africans hunting,<sup>100</sup> but it seems as if the resident magistrates allowed the Africans considerable latitude in the matter. Africans from the Umvoti Mission station on the north coast, for example, went out hunting, in 1868, three or four times a week within a few miles of the magistrate's office, killing upwards of twenty buck in a day.<sup>101</sup> It is obvious from the following letter to the editor of a local paper that some Africans were indeed apprehended for contravening the Game Law: the letter also reflects the attitude of the indignant white 'Sport', and that of the official enforcing the law:

'It appears from a judgement given in Victoria County (Inanda Division) that kafirs are allowed to kill bucks, "supposing" they are sick... A few days ago a kafir was charged with having broken the Game Law, but he pleaded that the buck was sick "before he killed it", the case was dismissed. I suppose... there must be a policy in not enforcing our laws too often on

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<sup>95</sup> Hamilton, Sketches of Life, p. 137.

<sup>96</sup> *Ibid.*, p. 212.

<sup>97</sup> Child, Portrait of a Pioneer, p. 46.

<sup>98</sup> Robinson, Notes on Natal, p. 13.

<sup>99</sup> Bleek, The Natal Diaries, p. 20; Hamilton, Sketches of Life, p. 215; Drayson, Sporting Scenes, p. 98.

<sup>100</sup> Natal Mercury, 11 September 1866; Natal Herald, 8 November 1866.

<sup>101</sup> *Ibid.*, 29 October 1868.

the surrounding black race, for fear that they may get up rather an extensive hunt some day. But at any rate we want fair play; if the white inhabitants are not allowed to hunt bucks during the close season, let the kafirs be made to respect the same law as well.<sup>102</sup>

Inadvertently, the introduction of the Game Law created the potential for political conflict with the Zulu kingdom. Some white settlers living near the Thukela decided to circumvent the problem of restricted hunting during the breeding season in Natal by taking themselves, and large parties of Natal Africans, across the river to hunt.<sup>103</sup> They did this without obtaining permission from King Mpande. His son, Cetshwayo, complained to the border agent, J. Walmsley, that the whites had raided hunting grounds that belonged to the Zulu, who looked to the grounds to provide food. Walmsley requested that the Lieutenant-Governor put a stop to such activities.<sup>104</sup> Accordingly, Government Notice No. 143 of November 1866 warned British subjects not to enter the Zulu country without the consent of the Zulu authorities.

The varied habitats of the coastlands allowed for abundant bird life that the settlers could kill for food, throughout the period under discussion. They could shoot snipe from the marshes, quail from the grasslands, and the Natal Francolin and guinea fowl from the coastal bush. The Pygmy Goose, from small lakes, was also a 'delicious bird on table',<sup>105</sup> and down the south coast settlers made 'good bags of widgeon' (the Cape Teal) for suppers in 1864.<sup>106</sup> But it was the pauw (Stanley's Bustard) of the grassy flats that was 'one of the most esteemed species of game in the Colony'.<sup>107</sup> They too seem to have been numerous in the coastlands, despite the fact that private individuals shot large

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<sup>102</sup> Ibid., 1 October 1868.

<sup>103</sup> Natal Mercury, 27 October 1866.

<sup>104</sup> S.N.A. 1/6/3, R 565, J. Walmsley to T. Shepstone, 15 October 1866.

<sup>105</sup> Drayson, Sporting Scenes, pp. 58-9; Mann, Colony of Natal, pp. 163-4.

<sup>106</sup> Hamilton, Sketches of Life, p. 213.

<sup>107</sup> Mann, Colony of Natal, p. 164.

numbers of them.<sup>108</sup> Of these birds, partridges, pauw and guinea fowl were all included in Schedule A of the Game Law. This meant that they could not be shot between 15 September and 15 April. In his statement on the law, the Attorney-General commented that the aim of this stipulation was to protect birds during the breeding season,<sup>109</sup> but he gave no indication whether their numbers had been seriously depleted by 1866, as he did for other species of fauna.

As was the bay of Durban, the sea and rivers of the coastline were well stocked with fish. There are, however, very few records of settlers fishing for their food, which might simply mean that they did not bother to record the activity or that they did not fish because they were not fish-eaters. On the north coast, where a settler owned a huge seine net, fishing in the early 1850s was a collective activity, requiring about twenty people to help drag the river mouths and sea.<sup>110</sup> Down south, we know of at least one settler who, in the mid-1860s, was able to feed well on the abundant supply of fish in the Mkhomazi River.<sup>111</sup> Despite the large amount of fish available to settlers, only one commercial fishery was established in the coastlands outside of Durban: Sidney Turner operated a large seine net at the mouth of the Mzimkhulu during 1866, and until he left the area in August 1867. During 1866 he caught about two tonnes (two tons) of fish, which he dried and sold in Umzinto and Durban to plantation owners as food for their Indian labourers who were fish-eaters.<sup>112</sup> As he was also ferry-man, store-keeper and trader, he did not have the time to extend the fishery to exploit the abundant supply of fish more intensively. Besides the fishing activity of white settlers, it is likely that some groups of Africans caught and ate fish, as had happened earlier in the century along the coast.<sup>113</sup>

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<sup>108</sup> Hamilton, *Sketches of Life*, p. 224; N.A.D. Acc. no. 254, Reminiscences of G. Lamond.

<sup>109</sup> A.G.O. 1/10/1, Statement on Law No. 10, 1866, 3 September 1866, p. 418.

<sup>110</sup> N.A.D. Acc. no. 254, Reminiscences of G. Lamond.

<sup>111</sup> Hamilton, *Sketches of Life*, p. 139.

<sup>112</sup> Child, *Portrait of a Pioneer*, pp. 48, 53, 56, 64.

<sup>113</sup> Webb and Wright (eds.), *The James Stuart Archive*, vol. 2, pp. 275-6.

Settlers who were sugar farmers also threatened the fish-life by releasing effluent from their mills into the rivers. As several sugar mills were concentrated close to Durban on the north coast, it is not surprising that the Little Mhlanga stream, a tributary of the Mngeni, showed signs of severe pollution by 1870.<sup>114</sup> The discharge of treacle and other refuse from the sugar mills into the river caused large quantities of fish to die.<sup>115</sup> This is the first recorded evidence of industrial pollution in Natal.

The coastal rock pools offered a variety of shellfish that could be used as food, such as oysters, mussels and crayfish. These could easily be gathered by settler families for their own consumption. There are records of such activity on the north coast during the 1850s and 1860s.<sup>116</sup> While there is a lack of similar evidence for the south coast this is not to say that settlers did not collect shellfish. It is highly likely that Africans living along the coastline, during these decades, exploited this food-source, either eating the shellfish themselves<sup>117</sup> or selling them to settlers, as happened on the south coast in the mid-1860s.<sup>118</sup> The limited use of fish and shellfish from the sea and rivers outlined above would not have made any impact on the fauna.

### Summary

In the late 1840s and early 1850s the total white population, scattered through the coastlands, numbered only about 1 000 people. The predominant productive activity was farming which was concentrated in Victoria and Durban Counties. There, farmers experimented with cash crops. Living alongside the settlers was an African population of about 43 000, living mostly like Iron Age farmers.

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<sup>114</sup> Robinson, Notes on Natal, p. 12.

<sup>115</sup> C.S.O. 1910, no. 41, statement of C.T. Sauer, 6 March 1875.

<sup>116</sup> Windham, 'The Natal diaries', p. 335; Shooter, 'Off to Natal', p. 460; Mason, Zululand: a Mission Tour in South Africa, p. 193.

<sup>117</sup> Webb and Wright (eds.), The James Stuart Archive, vol. 1, p. 99.

<sup>118</sup> Child, Portrait of a Pioneer, p. 36.

The success of some of the cash crops attracted white farmers to the coastlands in the late 1850s, and the total area under cultivation increased enormously. Because the sugar farmers adopted the plantation system, each farmer operated his own mill. The rapid growth of the industry was accompanied by an increase in the number of mills in the coastlands. By the 1860s the sugar farmers began inhabiting the southern counties in greater numbers. As the annual export of sugar increased, the sugar farmers grew in economic and political importance. By 1870 the total white population numbered about 3 500, with some settlers living in the small towns of Verulam, Pinetown, New Germany and Umzinto while the others lived on farms. In the meantime, the 1860s had seen the introduction of Indian labourers to assist the white farmers; their numbers had grown to about 4 600 by 1870. While the black population had doubled since the 1850s, some members of it had changed their exploitation pattern. The *kholwa* attached to the missions had embarked on new farming methods in the 1860s which led to capital accumulation. These economic experiments were thriving by 1870. Inevitably, settler activity in the coastlands set in motion certain changes in the environment. These will now be summed up in relation to the landform, the flora and the fauna.

The settlers made no significant alteration to the landform of the coastlands. The modification of the Mkhomazi River may have deepened the channel but there was little outward change. The quarries that they opened up throughout the coastlands seem to have been on farms, and were worked mostly for private use. As the records concerning these quarries are so limited, it cannot be assessed how extensively they were used or how much the quarrying activities altered the existing landforms before 1870. Much the same applies to the coal mining done at Compensation, where no figures are available for the quantity of coal mined during the period 1850 to 1870. Down south, at the Mzimkhulu, the vast beds of marble lay practically undisturbed.

The settlers changed the natural vegetation in several ways. They introduced several new plant species into the coastlands through their search for a staple cash crop. They destroyed the natural bush and forest as they gathered fuel for their domestic use and felled trees like red milkwood, yellowwood and sneezewood for housing, furniture and wagons. While this activity may have been very localized, their destruction of bush while

clearing for cultivation and collecting fuel for the sugar-mills was more widespread and on a far greater scale. Where farming was concentrated in Victoria County the indigenous vegetation was particularly heavily exploited.

The settlers thinned the fauna of the coastlands so that by 1870 the game had diminished both in number and variety. They killed off the carnivores that threatened their safety which resulted in lion having disappeared from the region by the late 1850s, while the populations of other predatory species were much reduced. They hunted out hippopotamus and elephant for their ivory so that by 1870 few hippopotamus remained, while elephant were no longer seen in the coastlands. Because many settlers relied on buck as a source of food, the numbers of bushbuck, duiker, oribi, and reedbuck seemed to diminish as the density of the white settlement increased. The bird-life may still have appeared prolific, but the fact that at least four species the settlers chose to shoot either for food or sport needed to be protected during the breeding season suggests that their numbers were indeed threatened. Settler fishing and shellfish collecting seemed to make no impact on the plenitude of these resources. However, the fish-life of the rivers, particularly on the north coast, suffered because the industrial pollution from the mills caused many fish to die. Overall, although many species of animals were still found in the coastlands, by 1870 settler activity had certainly taken its toll.

The most obvious change in the natural environment of the coastlands by 1870 would have been the reduction in the amount of coastal bush and forest, particularly in Victoria County. A closer inspection would have revealed how certain animal populations had been reduced. There is no record to show that the coastal settlers were aware of these changes which they had caused. They seemed to call no local meetings to discuss topics like bush destruction or game preservation. The restrictions placed on their destructive activity were all through government legislation and concerned timber and game supplies only.

CHAPTER 5THE MIDLANDSChanges in forces acting on the environment

The midlands of the Colony lay to the west of the coastal strip. They stretched from the Thukela River in the north, to just south of the Mpopana River in the north-west, to the Drakensberg in the west and the Mzimkhulu River in the south. They were demarcated into two counties, Pietermaritzburg and Umvoti, which will be described below.

Pietermaritzburg was the second largest county in the Colony, extending from the coastlands all the way to the Drakensberg and covering about 724 423 hectares (2 797 square miles).<sup>1</sup> In 1845, white settlement in the county centred in and around Pietermaritzburg, already a well-established town consisting of about 150 houses. With the arrival of the British settlers from the immigrant schemes of the late 1850s in particular, the number of whites living in the county escalated. Pietermaritzburg, the capital of the Colony, grew rapidly as many new immigrants rejected their rural plots and congregated in the town. By the time it was gazetted a city in 1854, it consisted of about 500 houses. By 1855 its white inhabitants numbered 1 470 with a further 1 075 whites living in the outlying areas.<sup>2</sup> There the settlement schemes had resulted in the establishment of the small villages of York to the north-east of Pietermaritzburg, and Richmond and Byrne both to the south. A tiny settlement was also growing at Alleman's Drift (later called Howick) on the Overberg route. The stretch of land between the capital and the Drakensberg appears to have been devoid of white settlement at this time. The number of Africans living in Pietermaritzburg in 1855 was unknown, but about 43 870 lived in the county as a whole.<sup>3</sup> Many probably lived in the Inanda location to

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<sup>1</sup> Robinson, Notes on Natal, p. xi.

<sup>2</sup> Blue Book, 1855, p. 244.

<sup>3</sup> Ibid.



the west, where the land was broken and worthless,<sup>4</sup> while about 8 000 people lived in the well-watered and fertile Zwartkop location,<sup>5</sup> south-west of the town.

While the total population of Pietermaritzburg County increased considerably over the next fifteen years, the pattern of distribution remained much as it had been. One small change though, was that some of the Indians who were no longer indentured chose to settle in the capital. In Pietermaritzburg then, in 1870, there were 3 632 whites, 2 984 Africans and 176 Indians; in the rest of the county there were 2 541 whites, 42 669 Africans and 36 Indians.<sup>6</sup>

Umvoti County covered an area of about 310 800 hectares (1 200 square miles).<sup>7</sup> While much of the area was broken rugged terrain, the temperate open highlands provided good land for grazing and agricultural purposes. For this reason, Boer families had settled near the Mvoti River in the 1840s. Many abandoned their farms in the 1848 Boer exodus from Natal, leaving only about 67 Boer farmers in the district.<sup>8</sup>

The colonial government surveyed a site for a village in the county in 1850 and made it the seat of the magistracy. As from 1854 this centre was known as Greytown. By 1855, when the magistrate's office was still under construction, the village could already boast a stone laager, two stores, a smithy and five resident families.<sup>9</sup> The total white population in the county by then was only 305,<sup>10</sup> of whom some were townspeople, some were attached to the German mission at Hermannsburg, and the rest were farmers

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<sup>4</sup> Welsh, The Roots of Segregation p. 178.

<sup>5</sup> Brooks and Webb, A History of Natal, p. 60.

<sup>6</sup> Blue Book, 1870, pp. R 4, R 10.

<sup>7</sup> Robinson, Notes on Natal, p. xi.

<sup>8</sup> J Laband and P. Thompson, War Comes to Umvoti: The Natal-Zululand Border, 1878-9 (Durban, 1980), p.1.

<sup>9</sup> Bleek, The Natal Diaries, p. 30.

<sup>10</sup> Blue Book, 1855, p. 244.

scattered throughout the district. Parts of three locations lay within the county: the Impafana and the Tugela locations to the north, along the Thukela River, and the Umvoti location to the east - all sited on land that was, for the most part, worthless. The total African population of the county was estimated in 1855, to be 7 255.<sup>11</sup> Over the next few years Greytown grew slowly, so that by 1865 it consisted of only about 30 houses with about 150 residents.<sup>12</sup> To a Greytown resident of the early 1860s, it seemed that there were now fewer Boer farmers in the district, with British farmers having taken their places.<sup>13</sup> By 1870 the total population in Umvoti stood at 1 473 whites and an estimated 29 029 Africans in the county.<sup>14</sup>

As in the coastlands, throughout the period under discussion, the predominant settler productive activity in the midlands was farming. With much of the two counties lying in the so-called mist belt, where both the sourveld and mixed grassland occurred, it was ideally suited to stockfarming, and in the early 1850s the dominant stock farmed was cattle.<sup>15</sup> However, as Lambert has pointed out, despite this suitability of the mist belt to dairy farming, lack of suitable transport made it 'economically unfeasible'.<sup>16</sup> Only those living close to the capital could really become dairy farmers. It is interesting to note that of the 396 men in Pietermaritzburg who qualified to be on the Burgesses' Roll of 1856, 29 were farmers.<sup>17</sup> The farmers' agricultural activities tended to be on a small scale, where the amount of grain crops cultivated was just sufficient to meet the farmers' own needs.

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<sup>11</sup> Ibid.

<sup>12</sup> Holliday, Dottings on Natal, p. 14.

<sup>13</sup> Windham, 'The Natal diaries', p. 365.

<sup>14</sup> Blue Book, 1870, p. R 10.

<sup>15</sup> Ibid. 1852, p. 132.

<sup>16</sup> Lambert, 'Africans on white-owned farms in the mist belt of Natal', p. 33.

<sup>17</sup> Natal Witness, 6 June 1856.

In the 1860s, the woolled sheep industry that had begun in the 1850s really prospered.<sup>18</sup> By 1864, for example, there were 94 325 sheep owned by whites in the midlands, whereas twelve years before there had been only 4 378.<sup>19</sup> Wool therefore became a staple export in the 1860s. The only really important agricultural crop was maize, with 3 960 hectares (9 780 acres) being planted in 1864.<sup>20</sup>

Within the capital the only productive activities of the settlers that drew on natural resources were those involved in the preparation of building materials and the manufacture of wagons, furniture and household commodities. Discussions of such activities will be confined to Pietermaritzburg in the 1850s only, although clearly the same sort of activities would have occurred in all the villages throughout the period. A useful source of information is the Burgesses' Roll of 1856,<sup>21</sup> although the qualifications needed to become a burgher meant that some white, male settlers were excluded from it. The roll shows that for producing building materials there were 2 stone-cutters, 5 masons, 2 brick-makers and 3 tile-makers; there were 6 wagon-makers and 22 carpenters; and for the making of commodities from wood there were 4 coopers, 2 cabinet-makers and 1 wood-turner. Outside of the capital, the most lucrative productive activity was that of the sawyers, who felled timber in the forests of the Dargle and Karkloof and brought it to the town for sale. Other than them, there were a few individuals, probably farmers, who surfaced-mined coal and quarried limestone that they sold on the Pietermaritzburg market.<sup>22</sup>

White settlements provided several opportunities for Africans to earn hard cash to meet their financial obligations. Obviously Pietermaritzburg, by far the larger of the two

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<sup>18</sup> For discussion of this, see J. Sellers, 'The origin and development of the woolled sheep industry in the Natal Midlands in the 1850s and 1860s', in Guest and Sellers (eds.), Enterprise and Exploitation.

<sup>19</sup> Blue Book, 1864, p. X 3; Ibid. 1852, p. 132.

<sup>20</sup> Ibid., 1864, p. X 2.

<sup>21</sup> Natal Witness, 6 June 1856.

<sup>22</sup> The productive activities mentioned in this paragraph will be discussed in full in the appropriate sections of this chapter.

midlands towns, offered the greatest number of choices. The influx of settlers created work for some Africans as builders or gardeners, and the *kholwa* from the mission station of Edendale were quick to take up this lucrative opportunity.<sup>23</sup> The proximity of the mission to the town made it possible for the *kholwa* also to corner the produce market. They were soon the major suppliers of vegetables and maize, bringing wagon loads of their produce to the market daily.<sup>24</sup> Their marketing success continued through the early 1860s so that when the mission station was hit by the depression of the mid-1860s, some *kholwa* had sufficient capital to buy the farm Driefontein near Ladysmith, where they could move and start afresh. For other Africans too, the town in the 1850s provided the chance to sell foodstuffs such as milk, eggs, wild fruit and potatoes, as well as commodities from natural resources, such as thatching grass and fuel.<sup>25</sup> The sale of fuel by Africans seems to have continued in the 1860s because, for example, about twelve enterprising ones applied for permission to cut fuel near Table Mountain and then bring it into the town in wagons, an activity the Surveyor-General thought would be 'of great benefit to the public'.<sup>26</sup> In the outlying districts, even a town as small as was Greytown in the 1860s provided the opportunity for Africans to sell foodstuffs such as chickens.<sup>27</sup>

Africans living to the south of the Mzimkhulu River also experimented briefly with cotton growing in a government aided scheme of the late 1850s. In an attempt to encourage Africans to grow a cash crop, the government distributed cotton seed through its 'Cotton Visitor of Native Tribes', John Shepstone. Within a few years it was evident that the scheme was not a success, partly because of the ravages of plant disease and

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<sup>23</sup> S. Meintjes, 'Property relations amongst the Edendale *kholwa* 1850-1900', in Journal of Natal and Zulu History VII, 1984, p. 15.

<sup>24</sup> Mason, Zululand, a Mission Tour in South Africa, p. 32.

<sup>25</sup> Ibid., p. 18; G.H. Mason, Life with the Zulus of Natal... (London, 1855), p. 195; Child (ed.), A Merchant Family in Early Natal, p. 70.

<sup>26</sup> S.N.A. 1/1/15. p. 21, P.C. Sutherland to Secretary for Native Affairs, 9 March 1865.

<sup>27</sup> Windham, 'The Natal diaries', p. 314.

locusts.<sup>28</sup>

The history of the growth and development of early Pietermaritzburg is already well documented.<sup>29</sup> There are, however, just a few aspects of it that impinge on an environmental history study and must therefore be mentioned. The first of these is the establishment of Alexandra Park. In keeping with their Victorian values, the settlers considered a park a necessity for their health and recreation. Accordingly, negotiations concerning the establishment of a park seem to have begun as early as 1850; despite this, it was only in 1863 that Alexandra Park was designated on the right bank of the Msunduze and even then it was not properly laid out during the period under consideration.<sup>30</sup> Soon after the park was proclaimed, the Acclimatisation Society applied to the Town Council to build there,<sup>31</sup> presumably planning to construct some cages so that animals that were in transit to other parts of the world could be kept. Nothing came of the scheme, although the Town Council seem to have agreed to it. As Pietermaritzburg had no Botanical Garden until the 1880s, Alexandra Park seems to have functioned partly as an experimental garden. It was referred to by the Town Council as 'our Park and Botanical Gardens'.<sup>32</sup> It was therefore a place where introduced plant species could be planted and tended by a curator.

The second aspect of Victorian Pietermaritzburg that needs mention is the annual Agricultural Show held in May. This too had its beginnings in the early 1850s. It is not the details of the formation and growth of the show that are of concern here, for they

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<sup>28</sup> NAD Bird Papers, Reminiscences of J.W. Shepstone, p. 132; S.N.A. 1/1/12, no. 22. J. Shepstone to T. Shepstone, 13 February 1862; Welsh, The Roots of Segregation, p. 186-7.

<sup>29</sup> See Hattersley, Portrait of a City and The British Settlement of Natal; R. Gordon, The Place of the Elephant, (Pietermaritzburg, 1981); Laband and Haswell (eds.), Pietermaritzburg, 1838-1998.

<sup>30</sup> D. McCracken, 'Parks and Gardens', in Laband and Haswell (eds.) Pietermaritzburg, 1838-1998, p. 60.

<sup>31</sup> P. C. 1/1/2, p. 1062, 5 July 1865.

<sup>32</sup> P. C. 1/1/2, p. 400, Park Committee's Report, 3 December 1862.

too are recorded elsewhere.<sup>33</sup> Instead, it is to draw attention to the attitude of white farmers in their desire to exploit the agricultural potential of the midlands. The Show brought together Overberg farmers, local Boers and the British settlers, all keen to see the exhibits of agricultural crops, stock animals and horses, and to learn from one another. As Pietermaritzburg was the centre of the midlands farming community, the prosperity of the farmers was essential to the well-being of the town. It is not surprising then that the Town Council was prepared to give a donation to the funds of the Agricultural Society,<sup>34</sup> along with the annual grant from the government. So successful was the Show that Greytown emulated it. From the available evidence it seems that one was first held in 1860, when the Resident Magistrate of Umvoti was made President of the Umvoti Agricultural Society.<sup>35</sup> Like the Pietermaritzburg Show, the Greytown Agricultural Show was held in May of each year.

Finally, for Pietermaritzburg to function efficiently as an administrative centre with a resident garrison and a productive market-place, all roads leading to the town needed to be in good repair.<sup>36</sup> With the limited finances available to it, the colonial government could effect only piece-meal repair works. Road parties began working in the early 1850s on the track from the port, attempting to improve the road to Sterk Spruit and Uys Doorns in particular. Once that was done, attention was turned to the stretch between the capital and the Drakensberg which was so important for the Overberg trade. As Greytown developed the road between Pietermaritzburg and Umvoti County was improved too. Most of the rivers remained unbridged until the 1860s, for building bridges was much more expensive than building roads. The government built timber bridges over the Mngeni at Alleman's Drift (Howick) and at Liversage's Drift on the way to Greytown. In Pietermaritzburg, the Msunduze was bridged in a substantial manner

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<sup>33</sup> R. Gordon, Natal's Royal Show (Pietermaritzburg, 1984)..

<sup>34</sup> P. C. 1/1/2 p. 495, 8 April 1863.

<sup>35</sup> Windham, 'The Natal diaries', pp. 312, 317.

<sup>36</sup> For information on this paragraph see Hattersley, The British Settlement of Natal, p. 272-5; S.G.O. 111/1/12 p. 4, W. Sargeant to Acting Surveyor-General, 14 February 1855; S.G.O. 111/9/3 p. 95, Surveyor-General's Report for the year 1858, 17 May 1859.

in 1858, after earlier bridges had collapsed.

With the improvements in the infrastructure it was easier for sawyers to bring heavy loads of timber and fuel into town, so they were encouraged to exploit the forests even more heavily. Similarly, loads of coal, stone and lime could be brought long distances. But, no matter how much the roads were improved, produce farmers had to live close to the markets they served as transport by wagon was so slow. Animal-powered transport was unreliable too, for it depended on the health of the animals and the availability of grazing. In Natal, devastating outbreaks of lungsickness in the mid-1850s and 1872 demonstrated forcibly how vulnerable animal-powered transport was.<sup>37</sup>

#### **Effects of human activity on the landform and mineral resources**

The settlers of the midlands made very little change to the landform. They undertook no drainage schemes, built no great stone structures in the capital and did not harden the few roads they built. Instead, they quarried building stone and limestone near their settlements for small churches and houses. They knew of local coal deposits, but exploited very little coal.

The greatest need for stone was in the capital. In the 1840s, much of the shale used for buildings came from Ohrtmann's quarry to the east of the town. With the population increase of the early 1850s, the exploitation of the quarry must have intensified, while other quarries were opened up in the same vicinity.<sup>38</sup> The only record that exists regarding the quantity of stone removed from any quarry is for 1852, when 2 000 loads of freestone were taken from a quarry near the town.<sup>39</sup> Building stone was also extracted to the west of the town, for Hattersley writes of settlers using sandstone from the hills

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<sup>37</sup> Ballard, 'Traders, Trekkers and colonists', pp. 136-7.

<sup>38</sup> Mason, Life with the Zulus of Natal, p. 169.

<sup>39</sup> Blue Book, 1852, return of the manufactures, mines and fisheries, pages unnumbered.

above the town, while ironstone from across the vlei to the north was also quarried.<sup>40</sup> New quarries were opened up on the northern part of the town lands, such as the quarry exploited by the stone contractor, Jesse Smith, for the stone for the Cathedral of St. Peter.<sup>41</sup> At much the same time stone was also used to build the Presbyterian Church in Church Street. Unfortunately, throughout the period the records concerning quarrying in the Blue Books are vague. A typical one reads: 'Quarries of building stone, slate and freestone are worked in several localities chiefly near PMB and for the purposes of building in the City'.<sup>42</sup> There is no detail whatsoever regarding the locality of the quarries or the quantity of stone extracted.

For the outlying areas, evidence in the Blue Books is even more sparse. In 1856, for example, no mention is made of Umvoti County at all, while for Pietermaritzburg County, simply that there were several sandstone quarries.<sup>43</sup> Certainly, Richmond by then had some houses built of local stone,<sup>44</sup> as was St Mary's Church. Of the sixteen houses in Greytown in 1861, at least two were of stone<sup>45</sup> and presumably so too were some of the houses at York and Howick, yet no mention of quarries near these settlements has been found. Indeed, the accuracy of the Blue Book information on quarries in the counties is very questionable, for the number recorded escalated from 6 in 1865, to 40 then 50 in 1869.<sup>46</sup> It seems unlikely that the demand for stone was such that it necessitated the opening up of so many new quarries during the years of the depression. Some of these quarries would have been on private farms, for we know that

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<sup>40</sup> Hattersley, The British Settlement of Natal, p. 319; Mason, Life with the Zulus of Natal, p. 170.

<sup>41</sup> P.C. 1/1/1, 13 April 1860; B. Kearney, Architecture in Natal, 1824-1893 (Cape Town, 1973), p. 21.

<sup>42</sup> Blue Book, 1852, p. Y 2.

<sup>43</sup> Ibid. 1856, p. 314.

<sup>44</sup> Hattersley, The British Settlement of Natal, p. 252.

<sup>45</sup> Windham, 'The Natal diaries', pp. 310, 313.

<sup>46</sup> Blue Book, 1865, p. Y 2; Ibid. 1866, p. Y 2.



farmers quarried stone to build their houses and farm buildings.<sup>47</sup>

In order to make the mortar needed for the brick and stone buildings, the settlers quarried limestone. This provided lime far superior to the shell lime used at the coast because there were limited limestone deposits there. In the midlands such deposits were numerous: on the town lands of Pietermaritzburg; near Uys Doorns; at Lindley's drift over the Mngeni, in the Inanda location; on the road to York and Greytown; and on farms near the Thukela.<sup>48</sup> Farmers could therefore bring loads to town, and the market column of the Natal Witness regularly featured small quantities of lime for sale.<sup>49</sup> Unfortunately, as with the official records on quarrying, there are no accounts of the exact amounts extracted. Certainly, from the quantities offered for sale, lime would appear to have been extracted on a limited scale.

The midlands also had several small coal seams. These were located in the early 1850s, at much the same time as coal was found in the coastlands.<sup>50</sup> The Blue Book of 1852 mentions the presence of a coal mine on the Mvoti River from where just under 2 tonnes (under 2 tons) were extracted.<sup>51</sup> This was probably for the sample tested on the British steamboat, *Sir Robert Peel*, along with samples from other ports of the colony. No further mention is made in any of the Blue Books of this period, either of this deposit or of the ones noted by the Surveyor-General at York and the Boston Mills. It seems very likely however, that in the 1860s the coal deposits were all exploited on a small scale to supply the Pietermaritzburg blacksmiths with the approximately 80 tonnes (80 tons)

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<sup>47</sup> Pennefather, 'Diary', entry for 30 March 1863; MacKenzie, 'Diary', entry for 8 February 1872.

<sup>48</sup> British Parliamentary Papers, Annual Report on the State of the Colonies 1852-55, vol. 7, (Irish University Press, 1970), p. 225.

<sup>49</sup> To mention but a few: Natal Witness, 4 December 1846, 23 March 1855, 30 March 1855, 14 May 1858, 15 July 1859, 14 December 1860, 9 May 1865.

<sup>50</sup> N.A.D., Acc. no. 152, John Fleming Journal, entry for 17 July 1852.

<sup>51</sup> Blue Book, 1852, return of the manufacturers, mines and fisheries, pages unnumbered.

they used per year.<sup>52</sup>

### **Effects of human activity on the flora**

The main vegetation pattern of the midlands counties was as follows. There was dry valley vegetation, giving way to thornveld as the altitude increased. The lower reaches of the midlands were covered with Acacia sieberana grassland, while higher up the large river valley basins and extensive ridges between were covered with grassland and scattered forests. In the uplands, towards the Drakensberg, there were grasslands with Podocarpus forests.

The settlers purposefully increased the number of species of flora found in the midlands by introducing certain fruit trees and crops. Although the Boers had planted many fruit and nut trees, particularly almond, fig and peach, keen gardeners such as J. Finnemore and T. Shepstone imported other species, such as apple and pears, so that Pietermaritzburg gardens and farms soon offered a very wide selection of fruits.<sup>53</sup> Following the example of the Boers, the British settlers also planted trees along the roads for shade.<sup>54</sup> Here, settlers like J. Dicks and members of the military such as Captain R.J. Garden were helpful in obtaining seeds of blue gum,<sup>55</sup> and seedlings were soon available for the public to buy.<sup>56</sup> Also, oak and willow trees were planted, both in the town and on surrounding farms.<sup>57</sup> Although John van der Plank's name is associated

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<sup>52</sup> Selected Documents Presented to the Legislative Council, 1857-1874, vol. 3, Second Session, Fourth Council, document no. 34, 1867, p. 3.

<sup>53</sup> NAD Bird Papers, Information on J.P. Finnemore; NAD Acc. no. 255, Narrative of Mrs G. Lamond; McCracken. 'Parks and Gardens', in Laband and Haswell (eds.), p. 64.

<sup>54</sup> *Ibid.*, p. 59; Mason, Life with the Zulus of Natal, pp. 106-7; Natal Witness, 15 October 1858.

<sup>55</sup> The Durban Advocate, 19 May 1853; NAD Bird Papers, Information on J. Dicks; NAD, Acc. no. 1323, Sutton Collection, G.M. Sutton to Mr Hutchinson, 9 December 1867.

<sup>56</sup> Natal Witness, 14 April 1854, 8 November 1861.

<sup>57</sup> NAD, Acc. no. 221, Diary of E. Parkinson, 22 August 1855.

with growing the first black wattle (*Acacia mearnsii*) in Natal in 1864,<sup>58</sup> there were by then specimens already growing sturdily on G. Wathens's farm near Richmond.<sup>59</sup> At Alexandra Park, the fact that about 20 000 young oak trees and more than 700 conifers and acacias were described as being ready for transplanting shows that the park was used partly as a site for cultivating seedlings.<sup>60</sup> As far as crops are concerned, the colonial government introduced cotton seeds to be grown as a cash crop.

As in Durban, the municipality had to contend with the burr weed which the steady streams of traffic from the port soon brought to the midlands. With Pietermaritzburg being the centre of the woolled sheep industry, the eradication of the weed was important. The local paper advised the public on its duty to destroy the weed,<sup>61</sup> and the Town Council promptly employed several hands to help eliminate it.<sup>62</sup> The Council appealed, through a Corporation Notice, to all members of the public to assist in this destruction,<sup>63</sup> and by August 1862 the Mayor could report that 'though it is not entirely exterminated it is so far subdued as to be considerably less offensive and injurious'.<sup>64</sup> Unfortunately, by 1869, the weed was flourishing again in all the vacant sites of the town.<sup>65</sup>

Between 1850 and 1870 the settlers were responsible for destroying much indigenous vegetation. In the first place, they cleared in order to cultivate crops. While they would have been used to grassland areas for this, it meant destroying the grass and felling any

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<sup>58</sup> See for example in Brooks and Webb, A History of Natal, p. 250; Hattersley, The British Settlement of Natal, p. 279.

<sup>59</sup> Dobie, South African Journal, pp. 28, 147.

<sup>60</sup> P. C. 1/1/3, Mayor's Minute, 4 August 1866.

<sup>61</sup> Natal Witness, 25 January 1861, 15 February 1861, 31 May 1861, 21 June 1861.

<sup>62</sup> P. C. 1/1/2, 7 March 1862

<sup>63</sup> Natal Witness, 8 March 1861.

<sup>64</sup> P. C. 1/1/2, p. 327, Mayor's Minute, 13 August 1862.

<sup>65</sup> Natal Witness, 30 April 1869.

scattered trees. In 1855, for example, 2 682 hectares (6 623 acres) were cultivated in Pietermaritzburg County and 1 096 hectares (2 706 acres) in Umvoti.<sup>66</sup> By 1870 the areas cultivated had extended overall to 5 472 hectares (13 510 acres) and 854 hectares (2 108 acres) respectively.<sup>67</sup>

The need for fuel was a constant demand the settlers placed on the midlands flora throughout the period under discussion. As very few records concerning the cutting and usage of fuel in the outlying areas have been found, it is necessary to confine this discussion to Pietermaritzburg only. In the 1840s the greatest demand on the flora around the capital would have been for domestic fuel. It was needed in settler homes for heating, cooking, candle-making and soap-making. In addition to this, there seems to have been only one fuel-burning industry, the brick and tile works of the Pistorius family.<sup>68</sup> These needs would probably have been met by the supply of fuel cut from the Town Bush Valley.

With the expansion of the town in the early 1850s, the demand for domestic fuel increased and the residents could make use of several sources. They could cut fuel themselves in the Town Bush area or they could buy it either from the African women who hawked it from door to door or from the market place. This fuel came from farms such as those of Piet Otto,<sup>69</sup> a prominent local farmer, or from a large thorn forest at Uys Doorns, 16 kilometres (10 miles) to the west of the town.<sup>70</sup> Despite these fuel supplies the price of fuel began to rise causing the Mayor, (D.B. Scott) to voice his alarm concerning this, in his mayoral address of 1856. He proposed planting seringa trees and other varieties on borough land because, as he said, 'Fuel, an article for which we now have to send many miles, would in a few years be rendered more abundant and

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<sup>66</sup> Blue Book, 1855, p. 312.

<sup>67</sup> Ibid., 1870, p. X 3.

<sup>68</sup> See discussions of this in Chapter 1.

<sup>69</sup> C. Barter, The Dorp and the Veld ...(London, 1852), p. 41.

<sup>70</sup> Mason, Life with the Zulus of Natal, p. 103.

consequently cheaper'.<sup>71</sup> Although nothing came of his proposal it is worth noting as the earliest suggestion of deliberately planting trees (other than fruit trees) for commercial use.

Because of their concern over the uncontrolled cutting of wood on the borough lands, the Town Council decided to amend the bye-laws in this regard.<sup>72</sup> Accordingly, the Lieutenant-Governor issued the necessary proclamation with the amended bye-law: 'That no person should be allowed to cut or carry away any Wood, or Bush, belonging to the Corporation, without first obtaining permission of the Council, by permit or otherwise.'<sup>73</sup> As with so many regulations concerning the environment in Natal, there was no officer appointed to implement the bye-law so it remained a dead letter. A few years later the Town Council appointed a committee to investigate the state of the Town Bush. Their report made it clear that little timber remained and they estimated that thousands of loads had been removed from the Town Bush without permission; they therefore recommended the appointment of someone to check on the removal of any wood.<sup>74</sup> Unfortunately, the person appointed resigned after a year.

Within fifteen years the British settlers increased, first the number, then the types of fuel-burning industries in the capital, thereby creating an even heavier demand for fuel. In 1858, for example, when fuel was 2s 6d a load,<sup>75</sup> the fuel-burning industries in the town were as follows: 2 candle and 2 soap manufacturies and 4 brickfields, with no tileyards mentioned.<sup>76</sup> Within just two years fuel cost 8s or 9s a load<sup>77</sup> and the industries

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<sup>71</sup> P. C. 1/1/1, p. 190, Mayor's address, 3 August 1856.

<sup>72</sup> C.S.O. 2300 no. 967, p. 387, D. Erskine to Mayor of P.M.B., 27 July 1858.

<sup>73</sup> Government Gazette, 1858, p. 93, Proclamation, 27 July 1858.

<sup>74</sup> P. C. 1/1/2, p. 538, Report of Special Committee on the Town Bush, 5 June 1863.

<sup>75</sup> Natal Witness, 24 February 1860.

<sup>76</sup> Blue Book, 1858, p.

<sup>77</sup> Natal Witness, 24 February 1860.

were: 2 candle and 1 soap manufactory, 3 tileyards and 8 brickfields.<sup>78</sup> The price rise of fuel seems to be directly linked to the diminution of the resource, for by the early 1860s local fuel supplies must have been exhausted. Fuel had to be brought from the neighbourhood of Table Mountain,<sup>79</sup> way beyond Uys Doorns. By then a commercial firewood depot had been set up in the town which must have helped regularize the fuel supplies.<sup>80</sup> It remained in operation for the rest of the period. The increase in the types of fuel-burning industries came with the introduction of steam-driven saws. This new technology boosted the efficiency of the important timber industry in the town. In 1865 there was one steam-driven saw operating, while the number of brickfields had risen to twelve.<sup>81</sup>

A further demand for fuel in the capital existed because of the needs of the British garrison, stationed at Fort Napier throughout the period. While their fuel supply normally seems to have been put out to tender,<sup>82</sup> for five months of 1860 we know that they cut wood from the Zwartkop location, with the permission of the Lieutenant-Governor.<sup>83</sup> Although exceeding their monthly estimate of 45 360 kilograms (100 000 lbs) they paid no levy at all.

The natural vegetation was also destroyed to provide thatching grass for the settlers. In Pietermaritzburg the main reed beds were in the vlei area to the north-west and west of the town and settlers sent their African servants there to cut it.<sup>84</sup> Being so readily

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<sup>78</sup> Blue Book, 1861, p. 302.

<sup>79</sup> Report of the ... Forests Lands in the Colony, p. 13.

<sup>80</sup> Natal Witness, 8 March 1861.

<sup>81</sup> Blue Book, 1865, p. Y 2.

<sup>82</sup> Natal Witness, 6 January 1860.

<sup>83</sup> S.N.A. 1/1/10, no. 32, Lieutenant W. Campbell to T. Shepstone, 17 April 1860; Ibid, no.55, Lieutenant W. Campbell to T. Shepstone, 5 July 1860; no. 95, Lieutenant W. Campbell to T. Shepstone, 4 October 1860.

<sup>84</sup> NAD, Acc. no. 152, Fleming Papers, letter from J. Fleming to W. Fleming, 9 May 1859; See the area of 'Marshy Ground' marked on the map of Pietermaritzburg, 1854, in Laband and Haswell (eds.) Pietermaritzburg, 1838-1988, p. 30.

available it was a popular roofing material; illustrations of the town in the 1840s and early 1850s show that many houses were thatched.<sup>85</sup> The thatching reeds were also a source of income, for some settlers sold bundles of it in the town.<sup>86</sup> There is no evidence available to suggest that the reed beds were irreparably damaged by this activity.

Further destructive activity of the settlers involved felling trees for timber. Like the Boers, the British settlers wanted certain types of timber for buildings, wagons and furniture, and so they looked to the mist-belt forests to supply their needs. The main forests lay in a narrow belt, stretching the length of the two counties. British sawyers spread themselves out through the forests of the Dargle and Karkloof in particular, opening saw mills from the early 1850s onwards.<sup>87</sup> Yellowwood, sneezewood and stinkwood timber, in particular, were sold by the town's timber merchants.<sup>88</sup> Despite this availability of timber in town, some individuals chose to fell timber for themselves in the forests of the Zwartkop location.<sup>89</sup> This was an unlawful activity, but once the Natal Native Trust came into being the permission could be obtained from it to fell timber in location forests, at the cost of 5s per wagon load.

Timber was also exported from Natal in the 1850s. In 1854, for example, Natal exported yellowwood valued at just less than £2 000.<sup>90</sup> Although we cannot be certain, it is likely that this was cut from the midlands' forests. This exporting of timber, mainly to the Cape, continued until 1859.

The economic spurt that Natal enjoyed in the early 1860s directly affected the

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<sup>85</sup> *Ibid.*, pp. 26-7.

<sup>86</sup> Mason, *Life with the Zulus of Natal*, p. 187.

<sup>87</sup> NAD Acc. no. 152, Journal of John Fleming, entry for 30 April 1853; Hattersley, *The British Settlement of Natal*, pp. 271-2.

<sup>88</sup> *Natal Witness*, 15 July 1859, 1 May 1863, 4 December 1863, 3 February 1865, 5 January 1866, 1 April 1870, 2 September 1870.

<sup>89</sup> C.S.O. 2237, no. 707, J.C. Muller to Lieutenant-Governor, 11 January 1848.

<sup>90</sup> *Blue Book, 1854*, p. 246.

exploitation of timber around the capital. In 1861 the only commercial enterprises requiring timber as a raw material were the 9 wagon manufactories, while in 1865 there was 1 cooper in business, as well as 15 carpenters', joiners' and cabinet-makers' shops, and 12 wagon manufactories.<sup>91</sup> Because there was 1 saw mill in operation too, it meant that 29 of the 70 manufactories and works listed for Pietermaritzburg were concerned with timber. In the Pietermaritzburg County by then there were 8 saw mills and 20 pit-saws in the forests.<sup>92</sup>

The felling of timber, both lawfully and unlawfully, by white settlers continued in the Zwartkop location in the 1860s.<sup>93</sup> The need for some control over the felling there led to the Natal Native Trust to appoint a conservator in 1867.<sup>94</sup> For the rest of the forests of the mist-belt, the evidence of the destructive activity of the settlers was very clear by 1870. A leader column of the Natal Witness summed it up:

'Any one who, twenty years ago, was acquainted with what is called our yellow-wood belt, - which stretches from Blink Water point near the Greytown road to the Umzimkulu, and which is our only source of timber, - and will examine it now, will be astonished to see what an extent of wholesale destruction has been accomplished during the interval.'<sup>95</sup>

Finally, the introduction of so many head of stock into the midlands would have affected the composition of the grasslands. In the first place, both cattle and sheep graze on preferred grasses, thereby reducing them and allowing unpalatable grasses to dominate the herb layer. Although there is no existing evidence to show that this had begun to happen in the midlands by 1870, it is highly likely that the process of change had been initiated. In the second place, stock farmers traditionally burnt the grass to encourage good grazing, and this practice too could have altered the species composition of the

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<sup>91</sup> Ibid.,1861, p. 302; Ibid.,1866., p. Y 2.

<sup>92</sup> Ibid., pp. Y 4, Y 6. For the capacity of these saw mills see McCracken, 'The indigenous forests of colonial Natal and Zululand', pp. 26-8.

<sup>93</sup> S.N.A. 1/8/7, p. 210, T. Shepstone to E. Griffith, 13 March 1860; S.N.A. 1/1/15, no. 47, Rev. G. Blencome to T. Shepstone, 12 August 1865.

<sup>94</sup> Discussed in Chapter 2.

<sup>95</sup> Natal Witness, 25 February 1870.



plant succession by retarding the invasion of woody plants. As discussed in Chapter 2, the legislation on grass burning concerned only unlawful burning. It still allowed a land-owner to burn his own grassland at any time of the year.

### **Effects of human activity on the fauna**

The open grasslands, scattered forests, thornveld and dry river valley vegetation allowed for a rich diversity of fauna in the midlands. As in the rest of the Colony, the midlands settlers destroyed certain species of game for their own purposes, with never a thought for the future. Their destructive activity will be discussed following the pattern already established in this thesis.

The settlers of the midlands, as in other parts of Natal, killed carnivores like hyenas, jackals, leopard and lion. In the 1840s and early 1850s all these species were found in the vicinity of Pietermaritzburg,<sup>96</sup> but by the mid-1850s when the town had grown considerably, these animals had moved further away. Thereafter, lion were seen only on occasions in areas such as Noodsberg, and between the Mngeni and Mpfana (Mooi) rivers.<sup>97</sup> Their appearance in the 1860s, even in the most remote areas, was very rare.<sup>98</sup> Leopard, on the other hand, could be found in the thick forests such as the Karkloof<sup>99</sup> throughout the period. In 1864 in the Richmond area, when a great hunt was called up to eliminate serval cats, three leopard were killed.<sup>100</sup> Leopard could still be found to the south of Richmond in 1868, according to a record of a bounty paid out under the Noxious Animals Law.<sup>101</sup> Africans, either accompanying hunts that were led by white

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<sup>96</sup> N.A.D. Bird Papers, Reminiscences of C.W. Pistorius; De Natalier, 24 May 1844; Natal Witness, 23 June 1846; Natal Independent, 7 August 1851; Mann, The Colony of Natal, p. 160.

<sup>97</sup> Natal Witness, 3 August 1855, 21 October 1859; Mason, Zululand, p. 144.

<sup>98</sup> Mann, The Colony of Natal, p. 160; Child, Portrait of a Pioneer, p. 73.

<sup>99</sup> N.A.D. Acc. no. 29, Diary of A.H. Jones, entry for 14 November 1864.

<sup>100</sup> Hamilton, Sketches of Life and Sport, p. 45.

<sup>101</sup> Natal Herald, 10 September 1868.

of 32 elephant were seen well to the north-west of the capital.<sup>106</sup> Thereafter, the animals must have moved far away from human settlement as the only record of them during the 1850s that has been found to date described them as being numerous in the bush along the Thukela River.<sup>107</sup> The last sighting of elephant seems to be that in 1863, when their spoor was seen near the Thukela River in the vicinity of Fort Buckingham,<sup>108</sup> a small frontier fort to the north-east of Greytown. Hippopotamus too must have been hunted intensively. Despite the fact that Piet Otto attempted to create a preserve for them in the stretch of the Mngeni near his home,<sup>109</sup> members of the settler elite hunted them nearby in the 1850s.<sup>110</sup> By the 1860s they were seen only occasionally in that vicinity<sup>111</sup> although they were still fairly numerous in the Thukela River.<sup>112</sup>

The buffalo population suffered a similar decrease in size. In the early 1850s these animals were still a common sight in the forests at Byrne,<sup>113</sup> and were hunted for sport by members of the settler elite to the north of the capital.<sup>114</sup> Indeed, buffalo were described as being 'one of the most exciting, but also one of the most dangerous objects of the colonial chase'.<sup>115</sup> By the mid-1860s, however, they too were found only far from residential areas, such as down south at the Mkhomazi<sup>116</sup> or in the thickets of the

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<sup>106</sup> N.A.D. Bird Papers, Information on J. Dicks supplied by H. Dicks.

<sup>107</sup> Mann, The Colony of Natal, p. 160.

<sup>108</sup> Pennefather, 'Diary', entry for 1 July 1863.

<sup>109</sup> N.A.D. Bird Papers, Reminiscences of G.A. Lucas; Barter, Dorp and the Veld, p. 42; Mann, The Colony of Natal, p. 161.

<sup>110</sup> Killie Campbell Africana Library, C. Barter, 'Natal diary', entry for 1 December 1852.

<sup>111</sup> N.A.D. Acc. no. 29, Diary of A.H. Jones, entry for 26 January 1864.

<sup>112</sup> A.F. Hattersley, The Natalians, Further Annals of Natal (Pietermaritzburg, 1940), p. 111; Pennefather 'Diary', entry for 30 June 1863.

<sup>113</sup> Mason, Life with the Zulus of Natal, p. 152.

<sup>114</sup> Barter, 'Natal diary', entry for 31 January 1853.

<sup>115</sup> Mann, The Colony of Natal, p. 161.

<sup>116</sup> Dobie, South African Journal, p. 133.

sportsmen were able to increase the intensity of their hunting through the employment of African hunters and beaters. Sixteen mounted officers, prominent local farmers and townsmen, accompanied by about 150 Africans from the Zwartkops region, spent the day hunting in the kloofs near the town. At the end of the afternoon the Africans came out with 'by far the largest share of the spoils, amounting to twenty bucks'.<sup>122</sup> A few townsmen also went on longer trips, such as that made to the Noodsberg in 1848, to shoot eland and hartebeest.<sup>123</sup>

In the early 1850s, many of the residents of Pietermaritzburg were able to provide for their dinners from the wild duck on the banks of the Msunduze and the snipe on the marsh at the foot of Town Hill.<sup>124</sup> They also hunted reedbuck, oribi and duiker near the town for meat.<sup>125</sup> Parties led by Piet Otto hunted buck in the Zwartkop kloofs, as well as on his extensive farms near the town. One of the participants of these hunts noted that 'game is abundant, and the weekly chase rarely fails to add a dainty ourebi ... or fat riet bok ... to the contents of the larder'.<sup>126</sup> Although it is likely that residents shooting animals for food killed only as many as they needed, the growth of the town's population in the 1850s meant that there was an increasing concentration of people preying on the animals. As a result, the game bird and buck populations must have been severely reduced.

In addition to the settlers killing animals for food, the number of people hunting for sport increased during the 1850s. Hunting became fashionable amongst members of Pietermaritzburg's wealthier classes. Groups of settler elite accompanied by hounds, hunted regularly to the south and west of the town.<sup>127</sup> While still within sight of the

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<sup>122</sup> Natal Witness, 19 November 1847.

<sup>123</sup> N.A.D. T. Shepstone papers, A 96, vol. 1, Diary entries for 17, 18 November 1848.

<sup>124</sup> Mason, Life with the Zulus of Natal, pp. 105, 175.

<sup>125</sup> Drayson, Sporting Scenes, p. 99.

<sup>126</sup> Barter, The Dorp and the Veld, p. 42.

<sup>127</sup> Hattersley, The British Settlement of Natal, p. 332 and The Natalians, p. 184.

capital they were able to shoot reedbuck, oribi, duiker and Stanley's Bustard: game was so plentiful that a couple of hours sufficed to get 'a buck or two'.<sup>128</sup> In the Karkloof area farmers got up grand hunts in the early 1860s, where African beaters were used to drive the buck from the bush.<sup>129</sup>

The effect of this destructive activity was very clear by the late 1860s. The buck and game bird populations in the vicinity of Pietermaritzburg had obviously been thinned considerably. There is a lack of evidence for these years of the residents hunting buck to provide food, which suggests that there were few to be found. Also, we know that it was no longer feasible to follow the chase close to the town, for few head of game could be bagged. Instead, hunters had to be prepared to ride long distances from settled areas for their sport.<sup>130</sup> Those wanting to shoot partridges, however, could still do so near to the town.<sup>131</sup> As a local farmer observed: 'There is a great extent of uninhabited ground on the hills above the town bush and it is regularly shot over by people from Town so I have no delicacy in doing likewise.'<sup>132</sup>

The villages in the midlands were all small which meant that there were few residents to prey on the game in the vicinity. However, the quantity of the game resources of their environs seemed to depend on the villages' proximity to busy routes. York and Greytown, for example, were out of the way and so the game near them was relatively undisturbed by travellers. Even in the 1860s, a Greytown resident could spend an afternoon hunting near the town and be sure of returning with a buck, or partridges and wild duck.<sup>133</sup> Near York, oribi were still common in the early 1860s and hartebeest could

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<sup>128</sup> A.F. Hattersley, More Annals of Natal (London, 1936), p. 131.

<sup>129</sup> Dobie, South African Journal, p. 58.

<sup>130</sup> Natal Witness, 4 June 1869, 20 July 1869, 17 August 1869.

<sup>131</sup> Pennefather, 'Diary', entry for 19 March 1864.

<sup>132</sup> *Ibid.*, entry for 1 March 1865.

<sup>133</sup> Windham, 'The Natal diaries', pp. 312, 316, 338.

still be seen in 1866.<sup>134</sup> A village like Howick, on the other hand, was on the Overberg route so there was a constant stream of travellers through it, with many of them shooting game for food. Whereas game had been plentiful in that area in the late 1840s,<sup>135</sup> by 1864 about the only species of buck in the vicinity was the blue duiker.<sup>136</sup> Writing in 1867, a local resident of the Howick area commented that 'the country round here at any rate has been pretty well cleared of Game, a buck is nearly as much of a rarity here as in England'.<sup>137</sup>

For the scattered rural families, the position was very different from that of the capital's residents. Although the rural settlers were very dependent on game as a source of meat, their exploitation of birds and buck was unlikely to have had a deleterious effect on the wild-life of the midlands. Throughout the 1850s and 1860s a settler family, the McLeods of the Byrne Valley, ate Stanley's Bustard, reedbuck and bushbuck, while ignoring the small blue duiker because they carried so little flesh.<sup>138</sup> In the Karkloof, Dargle and Otto's Bluff areas, in much the same period, farmers ate partridge, wild duck, quail and snipe.<sup>139</sup> They hunted regularly. The diary of one resident in the early 1850s shows that he hunted successfully five or six times a month.<sup>140</sup> His prey included reedbuck, oribi, rhebuck, wild duck, Stanley's Bustard and partridges.

Although buck were no longer commonly seen near Pietermaritzburg in the 1860s, there

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<sup>134</sup> Pennefather, 'Diary', entries for 12 July 1863, 15 June 1866.

<sup>135</sup> Bird, 'Natal 1846-51', p. 11.

<sup>136</sup> Hamilton, Sketches of Life and Sport, p. 67.

<sup>137</sup> N.A.D. Acc. no. 1323, p. 14, letter from J.E. Methley to Mr Hutchinson, 9 December 1867.

<sup>138</sup> Gordon (ed.), Dear Louisa, pp. 54, 62, 105, 106, 111, 115.

<sup>139</sup> N.A.D. Acc. no. 221, Diary of E. Parkinson, entries for 12, 13 December 1854, 28 March 1855; Pennefather, 'Diary', entries for 17, 19 and 21 March 1864; Mackenzie, 'Diary', entries for 18 to 27 July 1872.

<sup>140</sup> N.A.D. Acc. no. 221, Diary of E. Parkinson, see 23 entries for hunting between 10 November 1854 and 28 March 1855.

were still many in the outlying districts. Despite this abundance, at least one farmer in the Karkloof used the local game resources carefully, as a visitor to his farm observed in 1862: 'I quickly discovered that John was not allowed to make havoc among the game, they are considered too valuable for the pot to be slaughtered indiscriminately.'<sup>141</sup> The same attitude was shown by a farmer from Otto's Bluff for he wrote, 'After I had killed the Duiker a splendid Ourebi got up close to me but I did not like to kill him, so I hope I may find him again.'<sup>142</sup> This particular farmer often saw duiker, reedbuck, rhebuck, oribi and steenbuck in the vicinity of Otto's Bluff throughout 1865,<sup>143</sup> proving that not only were buck still numerous but also that there were still a variety of buck to be found in the midlands. Another farmer living further afield, recorded in the mid-1860s that he spent on an average of one to two days each week shooting buck or partridge.<sup>144</sup> Inland, towards the Drakensberg, rhebuck and oribi were certainly still a common sight in the mid-1860s.<sup>145</sup> As rural families depended so heavily on game for food, it is not surprising that advertisements for farms in the 1860s included descriptions of the game found on them.<sup>146</sup> Once the Game Law was introduced the farmers' freedom to shoot game was curtailed, although as there was no officer to implement the law the chance of them being apprehended was negligible. In the light of this fact it is interesting that a local farmer carefully noted in his diary the day the season for shooting birds opened.<sup>147</sup> Clearly he understood the need for the law and therefore complied with it even though there was no-one to check up on him.

A further edible source of protein was fish. As with the coastlands there is little

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<sup>141</sup> Dobie, South African Journal, p. 23.

<sup>142</sup> Pennefather, 'Diary', entry for 27 August 1864.

<sup>143</sup> Ibid. for 55 references to buck of different kinds between 21 January and 19 November 1865.

<sup>144</sup> A.F. Hattersley, Later Annals of Natal (London, 1938), p. 86.

<sup>145</sup> G. Fritsch, A German Traveller in Natal, translated by G. Lyttle, introduced by I. Hilton (Pietermaritzburg, 1992), p. 26.

<sup>146</sup> Natal Witness, 11 December 1863.

<sup>147</sup> Mackenzie, 'Diary', entry for 15 April 1872.

documentary evidence of settlers fishing, despite the fact that the rivers were described in the official records as being well-stocked with barbel, mullet and eel.<sup>148</sup> Much of the information of settlers' day to day living comes from their reminiscences, written long after the period they describe, so it is possible that the writers simply forgot to mention fishing in these accounts. Another explanation could be that as fishing is such a time-consuming past-time, the busy daily schedule of a small farmer simply did not allow for it.<sup>149</sup> However, it was something a child could do. The McLeod family at Byrne dined often on fish (species not stated) and eels which the young sons caught in a nearby stream or in the Mkhomazi River.<sup>150</sup> This suggests that such fauna were probably included regularly in the cuisine of a country family if they lived near a river, but as the rural population was small and sparsely scattered this activity made little impact on the fish resources of the midlands' rivers.

It appears that settlers living in towns did not attempt to supply themselves with fish from nearby rivers nor did they establish a fishery in the midlands. In the mid-1850s there was a family engaged in fishing in Durban who salted fish to send up-country,<sup>151</sup> while in the 1860s fresh fish caught in Durban was brought up to Pietermaritzburg for sale.<sup>152</sup> The residents in the capital could also purchase dried and pickled fish, imported into the colony.

A few settlers in the midlands also hunted certain animal species for financial gain. It is not possible to determine how many people were involved or how intensive their hunting was, as there seem to be no records directly concerned with the issue. In the 1840s there were various products from game sold on the market in Pietermaritzburg,

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<sup>148</sup> Blue Book, 1861, p. 303; Ibid., 1866, p. Y 25.

<sup>149</sup> Gordon (ed.), Dear Louisa, pp. 52-3.

<sup>150</sup> Ibid., pp. 89, 130.

<sup>151</sup> Blue Book, 1856, p. 315.

<sup>152</sup> Natal Witness, 8 July 1864, 19 July 1864.

such as ivory and the skins of buffalo, lion, leopard, eland and other buck.<sup>153</sup> While all the animals providing these products were found in the midlands area then, we do not know if the products came from animals in Natal or if they were brought into Natal through the Overberg trade. Obviously any dead animals that were sold for food must have been killed locally, such as guinea fowl and buck on sale in 1855.<sup>154</sup> Farmers were probably responsible for these occasional sales as was the case in the late 1860s when a farmer from the Noodsberg brought 'almost a cartload' of partridges to the market.<sup>155</sup> Also, settlers could sell live wild animals to agents in Pietermaritzburg who forwarded them to European zoological gardens, as discussed in Chapter 2.

### Summary

In the 1840s the white population of the midlands had been small, probably fewer than 1 000 people in all. It was concentrated in and around Pietermaritzburg, with a number of stock farmers in the outlying districts. Farming was the predominant productive activity. Very few whites lived in Umvoti County. The African population of the two counties was about 50 000 and lived an Iron Age farmer existence.

With the Byrne settlement schemes of the early 1850s, the number of white settlers in the two counties increased to about 1 800. Settlers congregated in the capital and the town grew rapidly. Small outlying villages of Greytown, York, Byrne, Richmond and Howick became established. Farming remained the most important productive activity, with farmers bringing in large numbers of livestock, sheep in particular, into the Colony. The needs of the townsmen for housing, fuel and furniture meant that some settlers could earn their living quarrying stone, felling fuel and timber, and producing the required commodities. This pattern of productive activities intensified through the 1860s. The African population now numbering about 52 000 had shown itself open to new exploitation patterns. While many continued to live as before, some of those living near

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<sup>153</sup> De Natalier, 15 November 1844, 26 September 1845.

<sup>154</sup> Natal Witness, 30 March 1855, 22 June 1855.

<sup>155</sup> *Ibid.*, 8 March 1870.



towns or along roads earned themselves money by selling foodstuffs, building materials and fuel.

Twenty-five years of settler activity inevitably altered the natural environment. The changes they made will now be summarised in relation to the landform, the flora and the fauna. The only change the settlers made to the landform was to open up some quarries for building-stone and limestone. While most of the quarries were in close proximity to the settlement, particularly Pietermaritzburg where the greatest demand for the stone existed, there were also scattered quarries on farms. It seems that the coal deposits the settlers knew of went unexploited.

The settlers were responsible for increasing the number of plant species in the midlands at the same time as they were destroying considerable areas of natural vegetation. In the 1850s, while they purposefully distributed cotton seeds and planted various fruit and shade trees on their farms and in towns, they accidentally introduced and spread the burr weed. Because of their need for thatching, domestic fuel and timber, they felled suitable vegetation close to the towns, to the point where by 1861 they had exhausted the fuel supplies around Pietermaritzburg. Beyond the towns, beginning in the 1850s, sawyers had cut deeply into the mist-belt forests, felling mainly yellow wood, stinkwood and sneezewood, to satisfy the demand for timber. By 1870 they had altered the state and composition of these forests through their heavy and selective exploitation. Farmers had destroyed natural vegetation by clearing the land for cultivation, with the extent of land affected increasing every year. Finally, the introduction of thousands of stock animals and the grass burning practices of farmers may well have begun to change the grassland composition.

Between 1845 and 1870 the destructiveness of the settlers diminished the quantity and range of animals in the midlands. This was particularly noticeable around settled areas where shooting had been most intense. Game found near Pietermaritzburg in 1845 had been plentiful and varied. Over the period it was thinned appreciably as settlers shot particular species only: large carnivores that were dangerous; buck for the pot; animals that provided trade articles; and game birds, buck and buffalo that were all the objects

of the chase. Large game also, of its own accord, moved away from the settled areas and from the forests that the sawyers exploited, heading instead nearer the Drakensberg where there were very few settlers. As a result, by 1870 certain species were no longer seen in the midlands. Lion could be found only near the Drakensberg, if at all, while the leopard had retreated to the fastnesses of the Karkloof forest and the forests south of Richmond; hippopotamus and buffalo could still occasionally be seen in the vicinity of the Thukela River while elephant had disappeared from Natal. In the environs of the capital and the village of Howick the only buck seen were small blue duiker. In the remote areas, although a variety of buck could still be found, both eland and hartebeest were rare.<sup>156</sup>

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<sup>156</sup> A.G.A. 1/10/1, p. 419, statement on Law No. 10, 1866, H. Cope, 3 September 1866.

CHAPTER 6THE FAR NORTHChanges in forces acting on the environment

For the purpose of this thesis, all the area of Natal north of the Mpofana (Mooi) River constitutes the far north. It consists broadly of an undulating plateau, rising to about 1 400 metres (4 500 feet) and the more elevated upland towards the Drakensberg. By the mid-1850s the far north was demarcated into two counties, Weenen to the south and Klip River to the north.

When the Volksraad accepted the Queen's authority in 1843, many Boers left Natal or moved into the triangle of land formed by the Thukela River, the Mzinyathi (Buffalo) River and the Drakensberg. The territory lay within the district of Natal, according to the treaty agreed upon by King Mpande and the British in October 1843.<sup>1</sup> This established that the northern boundary of Natal lay along the Thukela, until its junction with the Mzinyathi, then north along that river until the foot of the Drakensberg. Despite this, the Boers resident between the Thukela and the Mzinyathi rivers 'bought' this land from Mpande in January 1847 although it was not his to dispose of.<sup>2</sup> The Boers set up the Klip River Republic which proved short-lived when, under pressure from the British, Mpande repudiated his undertaking to the Boers. The majority of the Boers living in the district then crossed the Drakensberg in April 1848, forsaking Natal forever.

The Natal administration's response to the abortive creation of the Klip River Republic was to establish a greater presence in the area.<sup>3</sup> It proclaimed the Klip River County in

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<sup>1</sup> Laband, Rope of Sand, p. 126.

<sup>2</sup> *Ibid.*, p. 127.

<sup>3</sup> V. Harris, 'The Klip River Dutch community 1843-1889', Journal of Natal and Zulu History, vol. 8 (1984), p. 5.

October 1848, extending 963 480 hectares (3 720 square miles).<sup>4</sup> A resident magistrate was appointed and a town site on the Mnambithi (Klip) River was chosen as the administrative centre; in 1850 the town was named Ladysmith. Because of its position on the Overberg route, Ladysmith grew steadily so that by 1854 it was a 'neat hamlet of twenty-three houses, all of them well built'.<sup>5</sup> The commercial growth of the county was fostered by the government's encouragement of English immigrants who settled as store-keepers, traders and inn-keepers.<sup>6</sup> By 1855 the white population of the county numbered about 1 400 and the African population about 10 200.<sup>7</sup> The white inhabitants, who were almost all Boer farmers,<sup>8</sup> were scattered over the county while the Africans were probably concentrated in pockets such as along the Mzinyathi River and in the Thukela valley. The impression of the Surveyor-General when inspecting the land between the Biggarsberg and the Mzinyathi River in 1858 was that with the exception of a few Africans living at the foot of the Drakensberg, and about 60 Boer families living at some distance apart, the tract was 'unoccupied'.<sup>9</sup>

The Klip River County proved too large a unit to be administered efficiently<sup>10</sup> and so in 1862 it was subdivided into the magisterial districts of the Ladysmith Division - of about 388 500 hectares (1 500 square miles), and the Newcastle Division - of about 578 088 hectares (2 232 square miles) to the north of the Biggarsberg.<sup>11</sup> The village of Newcastle was established in the new division in 1864. It grew slowly, and within five years had

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<sup>4</sup> Robinson, Notes on Natal, p. xii.

<sup>5</sup> Colenso, Ten Weeks in Natal, p. 159.

<sup>6</sup> J.P.C. Laband and P.S. Thompson with S. Henderson, The Buffalo Border 1879. The Anglo-Zulu War in Northern Natal (Durban, 1983), p. 3.

<sup>7</sup> Blue Book, 1855, p. 244.

<sup>8</sup> Natal Witness, 4 May 1855.

<sup>9</sup> S.G.O. 111/9/3, Report for the year 1858, 17 May 1859.

<sup>10</sup> Laband and Thompson, The Buffalo Border, p. 3.

<sup>11</sup> Blue Book, 1863, p. R 2; Ibid., 1866, p. R 2.

only a score of houses.<sup>12</sup> By 1870 the population figures read as follows: Ladysmith Division, about 1 200 whites and over 33 000 Africans; the Newcastle Division, 1 070 whites and nearly 10 000 Africans.<sup>13</sup> The white population of Klip River County was made up predominantly of Boer farmers, for their numbers had been augmented by Boers from the Cape Colony in the late 1850s.<sup>14</sup> Some of the African population lived on mission stations such as Driefontein, near Ladysmith, while others resided on white-owned farms or unoccupied Crown land.

In 1854 the second county, Weenen, was demarcated to the south of the Thukela. It covered 481 740 hectares (1860 square miles),<sup>15</sup> with the seat of the magistracy at the small Boer town of Weenen. It had been the part of the country most thickly populated by the Boers in the 1840s for it was ideal cattle country.<sup>16</sup> But in 1848 many Boers had trekked from it in the general exodus so by 1855 there were only about 200 whites left, with about 10 000 Africans.<sup>17</sup> Many of the Africans lived within the three locations established in 1849: the Kahlamba at the foothills of the Drakensberg; the Impafana at the junction of the Mpofana with the Thukela; and the Umzinyati at the junction of the Mzinyathi with the Thukela.

The white population of Weenen County increased from 1850 onwards because of British settlers brought in by the immigrant schemes. In 1859 the seat of the magistracy was changed from Weenen to Estcourt. This developed into a small village at the river drift, as did Colenso (established in 1855) and Mooi River (established in the 1860s). By 1870 these villages were all still small with the total white population of the county just on

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<sup>12</sup> Robinson, Notes on Natal, p. 175.

<sup>13</sup> Blue Book, 1870, p. R 4.

<sup>14</sup> Harris, 'The Klip River Dutch community', p. 2.

<sup>15</sup> Robinson, Notes on Natal, p. xii.

<sup>16</sup> Methley, The New Colony of Port Natal, p. 15.

<sup>17</sup> Blue Book, 1855, p. 244.

1 200 whites, with Africans numbering about 36 000.<sup>18</sup>

Between 1845 and 1870, agriculture was the predominant form of productive activity in the far north. In the 1840s and 1850s the Boer farmers concentrated on cattle farming. Some wealthy Boers owned vast herds of cattle and some sheep.<sup>19</sup> In the lungsickness epidemic of the mid-1850s the farmers who lost most of their cattle increased their flocks of woolled sheep. In 1858 they were able to buy sheep at reduced prices from Free State farmers because of the state of insecurity in the Free State created by the war with the Sotho.<sup>20</sup> The early 1860s saw a great increase in the quantity of wool exported from Natal. Boer farmers produced comparatively little surplus grain and vegetables, but the arrival of the British settlers in the 1850s and 1860s may have stimulated interest in increased cultivation. As from 1868 the Klip River Agricultural Society held annual shows which were well attended, and which must have promoted more intensive farming methods and improved stock quality.<sup>21</sup> In 1870 the estimated total area under cultivation by whites in the Ladysmith Division was 1 060 hectares (2 617 acres), with 383 hectares (945 acres) for the Newcastle Division, and 1 277 hectares (3 154 acres) for Weenen County.<sup>22</sup> The two main crops were maize and wheat.

White settlement in the far north created the opportunity for certain African chiefdoms, during this period, to move into production for the market. The Hlubi, for example, under their chief Langalibalele, lived in Weenen County on a location between the Msuluzi (Little Tugela) and the Mtshezi (Bushmans) rivers. For them, the growth of the villages of Estcourt and Ladysmith in the 1850s provided the chance to become commercial farmers and sell their products in the towns, while buyers for their surplus beasts came all the way from Pietermaritzburg. The development of the Overberg trade

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<sup>18</sup> *Ibid.*, 1870, p. R 10.

<sup>19</sup> *Natal Witness*, 4 March 1854; N.A.D. Moreland Papers, Box 2, A Forssman to J. Moreland, 7 November 1851.

<sup>20</sup> Sellers, 'The origin and development of the woolled sheep industry', p. 158.

<sup>21</sup> Robinson, *Notes on Natal*, p. 153.

<sup>22</sup> *Blue Book*, 1870, pp. X 2-3.

created another market for their agricultural products by the early 1860s. The success of some of them in accumulating capital enabled them to buy ploughs which allowed them to increase their production for the market.<sup>23</sup> Their example was followed by the people on the Driefontein Mission.

While records of the extent of land cultivated by Africans in the two counties would have been estimates only, they show the following area under cultivation by 1870: Weenen County, 8 571 hectares (21 164 acres); Ladysmith Division, 12 501 hectares (30 867 acres); and the Newcastle Division, 1 247 hectares (3 080 acres).<sup>24</sup> The predominant crops were maize and sorghum.

Other resources the settlers drew on were lime and coal deposits, timber and game. Throughout the period several farmers in the far north extracted lime and coal from deposits there for local use and for sale on the Pietermaritzburg market. The quantity of coal that was mined increased during the late 1860s. A small community of sawyers earned a living from the sale of timber from the forests, especially during the early 1850s. Also, the resource of game was preyed on by farmers wanting food, and hunters requiring trade articles.

No estimate of the number of people involved in these productive activities can be given as the records are too incomplete. However, despite this lack of detail, it is still possible to discuss the significant changes the establishment of white settlers made to the environment of the far north.

#### **Effects of human activity on the landform and mineral resources**

As the settlers modified the landform of the far north very slightly, there is little information to record. Throughout the period individual farmers constructed dams and

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<sup>23</sup> Wright and Manson, The Hlubi Chiefdom in Zululand, p. 45; S.N.A. 1/3/17, p. 290, M. Osborn to T. Shepstone, 4 May 1867.

<sup>24</sup> Blue Book, 1870, p. X 6.

irrigation schemes,<sup>25</sup> but the records are insufficient to establish how many farmers did this or how extensive the schemes were. At Ladysmith, the colonial government built a dam and watercourse in order to supply the town with water, but these constructions were largely washed away when the Mnambithi River flooded in 1852.<sup>26</sup> No significant improvements were made to this scheme before 1870.

During the 1850s and 1860s farmers in the Ladysmith Division quarried outcrops of limestone and evidently sold it on the Pietermaritzburg market, as advertisements for Bloukrans lime and Klip River lime appeared in the Natal Witness.<sup>27</sup> According to the Blue Book, 1868, the limestone was found in limited quantities in two parts of the Division only,<sup>28</sup> but no record exists of the quantity quarried each year. Similarly, settlers must have quarried for building stone, but very few records exist of this activity either. Stone would have been needed for farm buildings, dams and for road-making and repairing, as in the case of the road over the Drakensberg in 1853.<sup>29</sup> To the north, in the Newcastle Division, there were several outcrops of whinstone which were used by farmers for a supply of stone for building houses, and kraals for sheep and cattle; but again the quantity of stone quarried is unknown.<sup>30</sup>

Throughout the period under discussion private individuals in the far north were involved in surface coal mining. The men who mined were not professional miners but farmers and traders who extracted small quantities of coal from exposed seams. Some of the coal was used locally as domestic fuel, the rest was carted to Pietermaritzburg and sold at the

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<sup>25</sup> C.S.O. 2274, no. 326, A. van Vugt to Colonial Secretary, 2 October 1846; C.S.O. 2241, no. 292, P. Ferreira to Colonial Secretary, 26 October 1852; N.A.D., Moreland Papers, Box 2, A. Forssman to J. Moreland, 7 November 1851; 'R.H.', 'Mixed farming in Natal', Natal Almanac and Yearly Register, 1869, pp. 36-7; Robinson, Notes on Natal, p. 181.

<sup>26</sup> S.G.O. 111/1/6, p. 89, D. Moodie to District Auditors, 9 September 1851; S.G.O. 111/1/7, p. 191, F. Becker to Surveyor General, 17 December 1852.

<sup>27</sup> See for example Natal Witness, 15 September 1854, 15 July 1859, 9 May 1865.

<sup>28</sup> Blue Book, 1868, p. Y 12.

<sup>29</sup> S.G.O. 111/1/11, p. 41, F. Becker to Colonial Secretary, 7 June 1853.

<sup>30</sup> Robinson, Notes on Natal, p. 174.



market.<sup>31</sup> Through the 1850s more outcrops were found and mined in the Ladysmith Division. In 1854 the total quantity of coal extracted from about four mines was only approximately 50 tonnes (50 tons).<sup>32</sup> By the late 1860s the number of coal mines worked had increased,<sup>33</sup> but the total quantity of coal extracts was unknown.<sup>34</sup> In the Newcastle Division, three outcrops were being mined by 1870, supplying a total of about 457 tonnes (450 tons) of coal.<sup>35</sup>

### **Effects of human activity on the flora**

In broad terms, the vegetation of the far north was as follows. The plateau was covered by good grasslands, while in the broad river basins the valley vegetation gave way to thornveld. Scattered forests existed on south-facing slopes. The farmers used the grasslands as grazing for their domestic stock; settlers felled fuel from the thornveld bush and cut timber from the forests. Each of these activities will now be considered.

It is possible that the human activity of stock farming changed the composition of the veld of the far north during the period under consideration. This can be discussed in theory only. Prior to about 1840, a wide diversity of indigenous herbivores lived off the vegetation. As this range of fauna included both grazers and browsers, the composition of the veld must have remained fairly constant, for the grazers fed off the herbaceous plants and the browsers off the woody ones. Once the human population increased in the area it upset this balance in the veld composition in two ways. Firstly, humans

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<sup>31</sup> De Natalier, 25 July 1845; Natal Witness, 24 July 1846, 7 August 1846, 4 September 1846, 20 November 1846, 2 April 1847; N.A.D., Moreland Papers, Box 2, A. Forssman to J. Moreland, 7 November 1851.

<sup>32</sup> Blue Book, 1854, pp. 256-7.

<sup>33</sup> For localities of coal deposits see N.A.D., Map 21, Map of Coal Fields of the Colony of Natal, F.W. North, 1881.

<sup>34</sup> Blue Book, 1869, pp. Y 4-5.

<sup>35</sup> Ibid., 1870, pp. Y 12-13.

destroyed many of the herbivores.<sup>36</sup> As they preferred killing some species such as eland and hartebeest to others, it meant that the proportions of grazers to browsers was altered. Secondly, humans introduced animals which were selective feeders into the area, which again created an imbalance. Between 1845 and 1870 the human population, both black and white, introduced thousands of cattle, sheep and goats into the area. In the period 1862 to 1870, for example, their numbers nearly tripled, so that in 1870 there were about 186 000 cattle, 158 000 sheep and 139 000 goats feeding off the vegetation of the far north.<sup>37</sup> Although there is no record of any change in the composition of the veld it must have occurred, as both sheep and cattle feed off preferred grasses so that gradually they reduce these, and other unpalatable ones come to dominate the herb layer. The goat, although it is a browser, feeds off only a part of the range of woody plants fed on by wild browsers,<sup>38</sup> so that decreasing numbers of wild browsers, accompanied by increasing numbers of a selective browser, would accelerate woody encroachment of the veld. It is therefore highly likely that the introduction of these animals into the far north set in motion a process of change in the composition of the veld, which was exacerbated by the fact that so many indigenous herbivores were destroyed during this period.

All homes required fuel so settlers cut into the indigenous thornveld mainly of Acacia spp.. Because most of the small white population was scattered on farms, this destruction would have had no serious effect on the indigenous vegetation. Outside of the home, the occasional gathering of firewood by travellers or itinerant road parties needing to heat rock before crushing it,<sup>39</sup> would likewise have made little impact on indigenous bush.

However, where the white population was concentrated in the small towns, the

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<sup>36</sup> See section below on 'Effects of human activity on the fauna'.

<sup>37</sup> Blue Book, 1861, pp. X 2-3; Ibid., 1870, pp. X 10, 12.

<sup>38</sup> Downing, 'Environmental consequences of agricultural expansion', p. 421.

<sup>39</sup> S.G.O. 111/1/9, J. Struben to Acting Surveyor General, 9 June 1854; S.G.O. 111/1/19, J. Struben to Acting Surveyor General, 31 July 1857.

destruction of bush for firewood would have increased and become more localized. This was clearly the case at Ladysmith by the early 1850s. The Resident Magistrate appears to have felt the urgent need for forest regulations for the Klip River Division in order to protect the timber and to provide a source of revenue.<sup>40</sup> The Lieutenant-Governor therefore issued a proclamation in 1854 concerning the cutting of bush and timber on Crown land around the town and townlands of Ladysmith.<sup>41</sup> This proclamation commented on the fact that the quantity of bush and timber on these lands had recently been greatly diminished and unless effective preventive measures were adopted, it would soon be 'entirely consumed'. The proclamation forbade the cutting of bush or wood for purposes other than household use from these lands without the permission of the Resident Magistrate. Those in possession of a licence from the Resident Magistrate had to pay 5s for each wagon-load removed.

As Ladysmith consisted of about two dozen houses by 1854, and had no fuel-burning industries, the exact cause of the heavy exploitation seems difficult to understand. The vegetation of the townlands was probably *Acacia* spp. thornveld and riverine scrub, but perhaps the density of the tree vegetation was fairly low.

Other areas where fuel-gathering became more concentrated were those set aside by the government as African locations. On the whole these were situated as broken tracts of land. As both the Impafana and Umzinyati locations were situated at the confluence of the rivers, their vegetation would have been dominated by *Acacia* spp.. Extensive clearing of this could have exposed the soil, causing soil erosion. The increase of the population could have made the fuel demands heavier, which could have exacerbated the soil erosion problem, causing donga development to begin. In the case of the Hlubi location, which was described as being too small for the number of people there,<sup>42</sup> this process could well have been under way by 1870.

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<sup>40</sup> S.G.O. 111/9/1, Report on the draft of 'Forest Regulations' for the Klip River Division: submitted by the Resident Magistrate of Klip River, 24 April 1852.

<sup>41</sup> Government Proclamation of 3 June 1854.

<sup>42</sup> A.H. Manson, 'The Hlubi and Ngwe in a colonial society, 1848-1877' (unpublished M.A. thesis, University of Natal, Pietermaritzburg, 1979), p. 51.

The main forests in the two counties lay along the Drakensberg. These were the Nkwelo and Lang Krantz, to the north of Newcastle; the Normandien forests to the west and south of Newcastle; the forest on the south-facing slopes of the Biggarsberg; the broken forest from Nolens Volens to the source of the Thukela; the Lombango forest near present-day Bergville; the Table Mountain forest south-west of Estcourt; and the Hlatikulu forest on the watershed between the Mtshezi and Mpofana Rivers.<sup>43</sup> These were predominantly yellowwood forests, but included other species like sneezewood, white ironwood, wild peach and white stinkwood.

During the 1850s and 1860s a small group of white sawyers earned a living from the timber they felled and sold from these forests.<sup>44</sup> It was predominantly yellowwood that they cut, and much of it was taken over the Drakensberg to the treeless Orange Free State where the demand for timber was great. This inland trade in timber was stimulated by the 1850-3 war on the eastern frontier which caused a price-rise for Cape timber reaching the Bloemfontein market; Natal timber could then compete successfully at a lower price. Where a wagon load from Algoa Bay cost £9 in Bloemfontein, a load from Natal cost only £6. During 1853 alone there was a brisk trade in timber from Natal to the Orange Free State, for about 600 wagon loads were taken inland.<sup>45</sup> Probably the biggest demand was for wood for wagons, although one Free State notable considered importing Natal timber for his house, in 1853.<sup>46</sup>

The sawyers' activity was affected not only by the demand for timber, but also by the availability of labour to assist them. At least one sawyer, after working in the forests for

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<sup>43</sup> McCracken, 'The indigenous forests of colonial Natal and Zululand', p. 21.

<sup>44</sup> S.G.O. 111/1/19, H. Knight to Surveyor-General, 18 December 1857; S.G.O. 111/1/19, T. Kelly to Surveyor-General, 27 July 1857; S.G.O. 111/1/19, W. Macfarlane to Surveyor-General, 27 July 1857; Child, Portrait of a Pioneer, p. 9.

<sup>45</sup> Natal Witness, 6 May 1853; N.A.D. Moreland Papers, Journal describing topography, fauna and flora of Natal, 1853, p. 338.

<sup>46</sup> M. Nathan, The Voortrekkers of South Africa (London, 1937), p. 37.

about five years, had to abandon his operations in 1857 because of a lack of labour.<sup>47</sup> Also, the timber legislation of 1853 meant that sawyers had to pay a monthly licence for each saw they operated. It is possible that this financial outlay was too burdensome for poorer sawyers. The government did not support the industry either when the opportunity arose. For example, the timber used in the construction of the government offices in Ladysmith in 1854 was not local timber but imported American deal wood.<sup>48</sup> As imported deal wood was cheaper in Durban than indigenous timber, the government probably bought up a large quantity of it which could then be used wherever it was needed.

The sawyers were not the only people who felled large timber. The timber legislation of 1853 made it possible for anyone to apply for a licence. Langalibalele, for instance, applied for a licence to cut timber in the 'government bush' in 1856, which he was duly granted.<sup>49</sup> There is no evidence to show if local people ever bought timber from Drakensberg sawyers or whether they cut what they required themselves. In 1863, for example, three farmers from the Klip River County set off for the Orange Free State with wagon-loads of planks they intended trading for sheep.<sup>50</sup> The record does not indicate whether they cut the wood on their farms or if they purchased it from sawyers. There was probably also much illegal removal of timber from the forests.

Human activity had caused much damage to the forests of the far north by 1870. A contemporary record for the Division of Newcastle makes this quite clear:

'The division is bare of trees, except in the immediate vicinity of the Berg, the kloofs of which are generally ornamented with a dense growth of trees and shrubs of which, in many places, the useful yellowwood forms the bulk. Red pear, white pear, and a few other useful timber trees are found there, but, unfortunately, a large proportion of the timber the natural forests contained has been cut out, and, in some places, that which is left is only valuable for firewood. A great deal of work by the hand of man, in the way

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<sup>47</sup> S.G.O. 111/1/19, H. Knight to Surveyor-General, 18 December 1857.

<sup>48</sup> N.A.D. Acc. no. 152, Journal of John Fleming, entry for 6 May 1854.

<sup>49</sup> S.N.A. 1/3/5, J. Macfarlane to T. Shepstone, 19 February 1856.

<sup>50</sup> Natal Witness, 6 February 1863.

of planting, will have to be done to supply the future requirements of the inhabitants, as our natural forests, originally of small extent, are now on the verge of exhaustion.<sup>51</sup>

The seriousness of this destructive activity in the Newcastle Division was recognized by the government. The Lieutenant-Governor signed a proclamation on 8 July 1870 with a view to preserving the timber and bush on the Crown lands in the Newcastle Division. It forbade the cutting of any timber, bush poles, wattles, firewood or other wood without a licence from the Resident Magistrate. As in Alfred County, a licence fee of £1 per month had to be paid for every cutting instrument used in the Crown land. There was, however, no special officer appointed to implement the regulation so the destruction continued. The Resident Magistrate of Ladysmith, reporting early in 1872 on Free State farmers who had illegally felled timber from the Drakensberg forests, advised the appointment of a forest ranger to protect the forests.<sup>52</sup> Accordingly, J.A. de Jongh was appointed conservator of the Drakensberg slopes in October 1872, and received £12 per annum in remuneration for his duties.<sup>53</sup>

The evidence cited above of the destruction of the forests of the far north is substantiated by an important document on the state of the Natal forests drawn up by the Forest Commission of 1878. This noted that the best part of the large timber in the Newcastle Division had been removed through a good deal of unlicensed cutting. In the Klip River County as a whole, the forests had sustained 'considerable damage from Sawyers' Licences, through Boers cutting out young poles, and through the activities of Africans cutting saplings and clearing bush'. In Weenen County the timber forests had been 'deplorably ruined', with white sawyers responsible for cutting down the big timber, and Africans cutting young timber.<sup>54</sup> How much of the damage had occurred before 1870 one cannot say, but certainly all the agents of destruction cited in 1878 were already

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<sup>51</sup> Robinson, Notes on Natal, p. 175.

<sup>52</sup> C.S.O. 407, G.A. Lucas to Colonial Secretary, 21 March 1872.

<sup>53</sup> Blue Book, 1872, p. M 40.

<sup>54</sup> Forest Commission, pp. 9-11 for all the information in this paragraph.

operating by 1870, so that the pattern of exploitation noted in 1878 was established during the period under discussion.

### **Effects of human activity on the fauna**

The far north provided several different habitats for animals of importance to the settlers. The grassland of the plateau was excellent grazing for herbivores such as eland and oribi, and attracted birds like ostriches and Stanley's Bustard. The riverside scrub and forests gave good cover for animals such as red duiker, bushbuck and leopard, while species such as mountain reedbuck were found in the upland grasslands on the slopes of the Drakensberg. The settlers hunted out animals from all these habitats to provide food, sport and trade commodities. They also probably killed off all big carnivores they encountered.

Records relating to large carnivores in the far north are very scant indeed. Military officers on a hunt in the vicinity of the Mtshezi River in the 1840s saw ten lion.<sup>55</sup> We do not know the duration of the hunt but the high number of lion seen suggests that there must have been a considerable number around. In the mid-winter months of the 1840s and 1850s many lion accompanied the large herds of herbivores that descended the Drakensberg to feed on the grasslands.<sup>56</sup> Both lion and leopard were still seen in the upper Thukela region in the early 1860s<sup>57</sup> for farmers had to make secure kraals for their livestock.<sup>58</sup> While there are no records of settlers actually shooting the large carnivores of the far north, as there are for the rest of Natal, it seems reasonable to assume that they did destroy them. Certainly these animals were seen less frequently in the 1860s which suggests that their numbers were diminishing. Indeed, there is no record of lion being sighted after the mid-1860s. The fact that the bounties paid out for the destruction

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<sup>55</sup> De Natalier, 16 June 1846.

<sup>56</sup> Mann, Colony of Natal, p. 160; Bird, 'Natal 1846-51', p. 15.

<sup>57</sup> Natal Witness, 25 May 1860; Child, Portrait of a Pioneer, p. 9; Dobie, South African Journal, pp. 76-8.

<sup>58</sup> Anderson, Twenty-Five Years in a Waggon, p. 11.

of noxious animals in Weenen County in 1868 included jackals and wild cats,<sup>59</sup> but no leopard, suggests that there were few leopard left in the area.

Herbivores were very numerous in the far north in the late 1840s and 1850s. Herds of eland, hartebeest, buffalo, oribi, grey duiker and rhebuck grazed on the plains, while bushbuck browsed in the thick cover of the ravines.<sup>60</sup> During these decades, every winter animals descended the Drakensberg in search of food; vast herds, thousands strong, of blesbuck, quagga, zebra and wildebeest moved down to the plains, followed always by lion.<sup>61</sup> In the late 1840s<sup>62</sup> the Boers from the Weenen area used to make the most of these annual migrations by hunting eland and hartebeest intensively during the winter months. They would then dry the meat to preserve it as food. Travellers and local farmers in the 1850s and 1860s killed buck for food too.<sup>63</sup>

Buck were also the prey of sportsmen, but the records do not always distinguish between the killing of buck for food as opposed to sport. One record from 1846 clearly concerned the killing of buck for sport only as two military officers killed 22 eland on one hunt,<sup>64</sup> which gives us an idea of the destructiveness of such hunting parties. There is a paucity of records in general for the far north, so the lack of accounts of settlers hunting for sport in the 1850s does not necessarily mean that no hunting occurred, but rather that no record was written. A few references from the 1860s show that hunting for sport was indeed a past-time of the more elite members of society, such as resident magistrates and military officers.<sup>65</sup> By the late 1860s, gentlemen from Pietermaritzburg

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<sup>59</sup> Natal Witness, 13 March 1868.

<sup>60</sup> N.A.D. Bird Papers, Reminiscences of J. Comins; Drayson, Sporting Scenes, pp. 60-3, 109-11.

<sup>61</sup> Bird, 'Natal 1846-51', p. 15; Mann, Colony of Natal, p. 163.

<sup>62</sup> Drayson, Sporting Scenes, pp. 109-11.

<sup>63</sup> N.A.D. Bird Papers, Reminiscences of Rev. J. Green; Anderson, Twenty-Five Years in a Waggon, p. 11.

<sup>64</sup> De Natalier, 16 June 1846.

<sup>65</sup> Windham, 'The Natal diaries', p. 321.



in search of good sport had to travel as far as the Weenen District. There they could still shoot 22 buck and numerous birds in three days.<sup>66</sup> Unfortunately the record does not state which species of buck were shot.

By the mid-1860s, although the annual migration of animals from the interior still occurred, there were far fewer animals in the far north than there had been.<sup>67</sup> This was despite the fact that the activities of the hunters in the midlands had driven much of the game towards the mountains.<sup>68</sup> This change in animal numbers over time was very evident for the area to the north of the Biggarsberg. When the Surveyor-General visited it in 1858 he found the tract overrun by numerous herds of quagga, large and small sized antelope, and ostriches.<sup>69</sup> By 1870, a settler noted that the quantity of game on the plain had 'very materially diminished of late years, owing to the wholesale destruction carried on by Boers and kafirs for the sake of skins' which found 'a ready market in the town'.<sup>70</sup> Unfortunately there seem to be no other records of the destruction of game to provide trade articles, but the effect of it was clear.

Birds too provided a source of food for the settlers. Again the lack of references on the topic is perhaps because it was too much an everyday occurrence to mention. In the 1860s, however, when there were more travellers and settlers in the area, there are some records. We learn that in the upper reaches of the Thukela River settlers shot plovers, wild ducks, storks and cranes,<sup>71</sup> whereas on the plains they shot partridges and bustards.<sup>72</sup> For example, in one month in 1864, a farmer shot 46 brace of birds, in addition to 17

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<sup>66</sup> Natal Witness, 4 June 1869, 20 July 1869.

<sup>67</sup> Child, Portrait of a Pioneer, pp. 9, 10; Anderson, Twenty-Five Years in a Waggon, p. 5.

<sup>68</sup> Hamilton, Sketches of Life and Sport, pp. 81-2.

<sup>69</sup> S.G.O. 111/9/3, Report for the year 1858, 17 May 1859.

<sup>70</sup> Robinson, Notes on Natal, p. 176.

<sup>71</sup> T.J. Lucas, Camp Life and Sport in South Africa (London, 1878, repr. Johannesburg, 1975), p. 105; Hamilton, Sketches of Life and Sport, p. 96.

<sup>72</sup> Drayson, Sporting Scenes, p. 59; Mann, Colony of Natal, p. 164.

buck, just for his larder.<sup>73</sup> We have no information as to whether this sort of human activity caused any of the populations of bird species mentioned above to decrease in the far north. The fact that partridges and bustards received protection under the Game Law during the breeding season indicates that these species were threatened in Natal, but it is not to say that the populations of them in the far north had necessarily diminished.

The only bird that provided a commodity for trade was the ostrich. The birds inhabited the grasslands of the far north.<sup>74</sup> Hunters shot ostriches for their feathers which collected a good price in Pietermaritzburg between 1845 and 1865. Not only was ostrich hunting remunerative but, in addition, little labour had to be spent on preparing the feathers for the market so that a hunter had a high return for his efforts. In 1847, where half an eland hide, which had to be tanned before being sold, fetched 15s in Pietermaritzburg, each ostrich quill sold for 9d.<sup>75</sup> Throughout the 1850s ostrich feathers were exported to the Cape and Britain but their value represented a very small percentage of the total value of Natal exports. In 1854, for example, the value of the feathers was £112 of the total exports valued at £42 824.<sup>76</sup>

In the 1860s, while the exports of feathers continued to represent a small percentage of the total value of goods exported, the best feathers were fetching ever-rising prices. In Pietermaritzburg they sold at £16 a pound in 1866,<sup>77</sup> whereas they fetched £25 a pound in 1868.<sup>78</sup> Ostriches therefore must have been much sought-after by hunters so it is not surprising that they were rarely seen from the mid-1860s onwards.<sup>79</sup> Under the Game

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<sup>73</sup> Child, Portrait of a Pioneer, p. 10, 11.

<sup>74</sup> Drayson, Sporting Scenes, p. 59; Lucas, Camp Life and Sport, p. 105.

<sup>75</sup> Natal Witness, 2 April 1847.

<sup>76</sup> Blue Book, 1854, p. 242.

<sup>77</sup> Natal Witness, 21 September 1866.

<sup>78</sup> *Ibid.*, 21 July 1868.

<sup>79</sup> Mohr, To the Victoria Falls, p. 33.; Hamilton, Sketches of Life and Sport, p. 84.

Law they were placed in Schedule C, which meant that the permission of the Lieutenant-Governor was necessary to shoot them. Although the Attorney-General made no special mention of ostrich numbers in his report on the law<sup>80</sup>, the fact that they were placed in Schedule C, thereby receiving the maximum protection offered by the law, speaks for itself. The feathers on sale after the introduction of the Game Law were probably from the Overberg trade.

### Summary

After the Boer exodus of the 1840s there were few white people living north of the Mpopana River. The small Boer village of Weenen existed, with the remaining white population scattered on farms, farming stock. Through the British immigration schemes and the arrival of some Boers from the Cape Colony, the white population gradually increased. The growth of the Overberg trade and the creation of magisterial districts led to the establishment of the villages of Ladysmith, Colenso and Estcourt, with Newcastle and Mooi River being laid out in the 1860s. They also created the opportunity for some African farmers to begin producing for the market. Although by 1870 the white population of the two counties of Klip River and Weenen had grown to about 3 500, it was still predominantly rural in nature as the towns were very small.

Because the white settlers were chiefly concerned with stock-farming, they made a minimal impact on the landform of the far north. They did not need to carry out any major excavation or drainage schemes, neither did they quarry stone or minerals on a large scale. Instead, they laid out a few irrigation ditches and constructed dams, quarried stone for a few buildings and surface-mined small quantities of coal from farms.

However, the changes they made to the flora and fauna were significant. They altered the flora in three main ways. Their introduction of thousands of stock animals to the grasslands may well have initiated a deterioration in the grasslands, speeding up woody encroachment of the veld. Secondly, where the cutting of fuel from the indigenous bush

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<sup>80</sup> A.G.O. 1/10/1, p. 417, Statement on Law No. 10, 1866, H. Cope, 3 September 1866.

was concentrated in a relatively small area, it caused environmental damage through reducing the soil cover and therefore laying it open to erosion. Thirdly, both licensed and unlicensed sawyers felled vast quantities of forest trees, particularly the dominant tree of the Drakensberg forests, the yellowwood, over a period of twenty years. As a result, the forests of the two counties were damaged irreparably.

The years 1845 to 1870 saw great changes in the fauna of the far north. The settlers appear to have shot out most of the large carnivores. White and African hunters destroyed large numbers of buck for their skins, while hunters killed ostriches for their feathers. The end result was that by 1870, lion were no longer seen in the far north, and leopard only occasionally; far fewer buck grazed the plain, while ostriches were seldom seen. It was a far cry from when the plains of the far north had teemed with animals.

## CHAPTER 7

### CONCLUSION

This thesis has investigated the changes that white settlers made to the natural environment of Natal, from the beginning of colonial rule in 1845 up until 1870. In order to establish an environmental baseline against which the impact of settler activities could be assessed, an understanding of the state of the environment in 1845 had to be reached. Chapter 1 therefore outlined the nature of the environment and its transformation by Iron Age farmers, hunter-traders and Boers.

With the establishment of the Colony in 1845, Natal came under the control of British officials. Chapter 2 outlined the culture of these new administrators which was shared by the batch of immigrants that arrived between 1849 and 1851. As so many people settled in the two main towns of Durban and Pietermaritzburg, the white population of Natal became predominantly urban and British, with a small, thinly-spread rural population of white farmers of both Boer and British stock. These settlers interacted with the natural environment within the constraints of their material and mental culture. They used natural resources to provide for their own subsistence and produced a surplus, where possible, to sell on the market. This caused them to perpetuate and intensify types of environmental exploitation already operating in Natal, and to initiate new ones.

The main body of the thesis, Chapters 3 to 6, examined the details of the irreversible transformation which the settlers caused in the landform and mineral resources, flora and fauna of Natal. These interactions between settlers and the natural environment resulted in what Merchant has called 'a colonial ecological revolution'.<sup>1</sup> In order to see this revolution in Natal in perspective, it is necessary to compare it with those caused by other settler societies. Ideally, settler societies from southern Africa should have been used for the comparison, but this was impossible as no detailed regional history was

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<sup>1</sup> C. Merchant, Ecological Revolutions: Nature, Gender and Science in New England (University of North Carolina Press, 1989), p. 2.

history was found that encompasses the total environment, as does this thesis. The environmental history studies done in southern Africa to date appear to be mostly thematic in approach, such as those relating to forestry,<sup>2</sup> hunting,<sup>3</sup> conservation, veterinary science, and the Transvaal beef frontier.<sup>4</sup> Indeed, so little in general is known of the environmental history of this country that in a book on environmental management in southern Africa, 250 years of settler activity towards the environment is discussed in just over two pages!<sup>5</sup> Consequently, for this thesis, comparisons have had to be made between the Natal settlers and the not dissimilar, but well-documented settler societies of North America and Australia.

As Dunlap has pointed out, these societies were among those that 'retained their cultural ties to Britain'.<sup>6</sup> They therefore shared with the Natal settlers a common mental approach towards the environment, that of exploiting nature to their own benefit to satisfy their material needs. It must, however, be pointed out that a major difference existed between Natal and the other two societies. In both North America and Australia, the settlers soon outnumbered the earlier inhabitants and indeed, practically exterminated them. In Natal, the African population always vastly outnumbered that of the comparatively small settler society.

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<sup>2</sup> H. Witt, 'The development of the timber industry in Natal, 1910-1960: a socio-environmental study' (unpublished conference paper, Pietermaritzburg, 1996).

<sup>3</sup> W. Beinart, 'Review article: Empire, hunting and ecological change in southern and central Africa', Past and Present, 128, (August, 1990) pp. 162-86.

<sup>4</sup> S. Brooks, 'Playing the game: the struggle for wildlife protection in Zululand, 1910-1930', (unpublished M.A. thesis, Queen's University, Canada, 1990). See Griffiths and Robin (eds.), Ecology and Empire for essays by J. Carruthers, 'Nationhood and national parks: comparative examples from the post-imperial experience', pp. 125-38; W. Beinart, 'Vets, viruses and environmentalism at the Cape', pp. 87-101; R. Grove, 'Scotland in South Africa: John Croumbie Brown and the roots of settler environmentalism', pp. 139-53; S. Milton, 'The Transvaal beef frontier: environment, markets and the ideology of development, 1902-1942', pp. 199-212.

<sup>5</sup> R. F. Fuggle and M. A. Rabie, Environmental Management in South Africa (Cape Town, 1992, second impression, 1994) pp. 13-5.

<sup>6</sup> T. R. Dunlap, 'Ecology and environmentalism in the Anglo settler colonies', in Griffiths and Robin (eds.), Ecology and Empire, p. 76.

The Natal settlers made little impact on the rock and mineral resources of the Colony. Useful rocks that they located were coal, marble, building stone and limestone. As the deposits of both coal and marble lay at considerable distances from a commercial centre, they went practically unexploited during the period under consideration. Building stone and limestone, if near a town, were extracted from quarries, but as no figures exist for the quantity of stone removed, the only assessment that can be made is based on the scale of settler road-making and building. From this it is possible to say that the amount of stone quarried, other than in the immediate environs of Durban, was very limited. A few colonists did prospect for copper and gold in the 1860s, but these minerals were not found in payable quantities; the settlers' investigation did, however, enable a more complete picture of the geological resources of the Colony to emerge.

Concerning the landform, the most obvious changes that the Natal settlers made were all in the vicinity of Durban. These were intended to improve the infrastructure of the major port of the Colony. In the early 1850s, the settlers drained the eastern and western vleis, and embarked on harbour works to deepen the entrance to the bay. By 1870, the most evident changes to the landform were the existence of Milne's Pier on the seaward side of the Point and the decreased size of the two vleis.

Just two examples will be used to illustrate that the sort of activities outlined above were also carried out by the settler societies of North America and Australia.<sup>7</sup> Both societies also altered the existing landform in order to improve the infrastructure for trade. In New England, for instance, settlers built an extensive system of canals that linked towns to the national market system,<sup>8</sup> while in Australia, settlers attempted to improve the access to river mouths by building training walls.<sup>9</sup>

The settlers altered the natural flora of Natal through several activities. They destroyed

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<sup>7</sup> Hattersley, The British Settlement of Natal, p. 220.

<sup>8</sup> Merchant, Ecological Revolutions, pp. 193-5.

<sup>9</sup> E. Rolls, 'The nature of Australia', in Griffiths and Robin (eds.), Ecology and Empire, p. 41.

forests by felling timber trees and cutting out fuel; they cleared natural vegetation for agriculture; they introduced thousands of stock animals to graze on the natural grasses; and they brought in exotic species. Each of these changes will now be discussed.

The deforestation which the settlers carried out to obtain timber for wagons, housing and furniture was highly selective. From the forests of the Drakensberg slopes, the sawyers felled yellowwood in particular. While some of this was exported from Natal in the 1850s, most of the deforestation carried out in the Colony was to provide timber for the colonists themselves. From the mistbelt forests they cut out yellowwood, sneezewood and stinkwood. In the immediate vicinity of Durban a far wider range of trees was felled: yellowwood, knobthorn, stinkwood, red milkwood and essenwood. At no stage during the period under discussion was there any attempt made to plant seedlings of these particular species in the forests affected. The result, therefore, of years of selective exploitation was that the populations of the selected species were permanently reduced. This altered the composition of the forests and as so many of the selected species were canopy trees, the forest microclimates were also affected.

In North America, settlers also selectively exploited certain timber trees from the forests, particularly for export purposes. New England settlers, for example, felled white oak, black oak, cedars and chestnuts for ships' timber.<sup>10</sup> As happened in Natal too, colonists cut down smaller trees just to clear a path to the larger ones. According to Cronon, the population of trees such as the white cedar and white pines did not regrow, so the settlers therefore permanently altered the composition of the forests of New England. In Australia, too, settlers felled selective indigenous trees such as cedar and jarrah for timber, to be exported from New South Wales.<sup>11</sup> Neither of these settler societies thought to plant seedlings in the forests but, like the Natal settlers, they cut trees as though the supply was inexhaustible.

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<sup>10</sup> W. Cronon, Changes in the Land: Indians, Colonists, and the Ecology of New England (New York, 1983), pp. 109-12, for all the information in the paragraph relating to New England.

<sup>11</sup> G. Bolton, Spoils and Spoilers: A History of Australians Shaping their Environment (North Sydney, 1981, repr. 1992), pp. 38-40.



Settlers destroyed indigenous flora by clearing it in order to plant crops. In Natal, it was in the coastlands in particular that extensive clearing occurred. There it was not just natural grassland that was destroyed, but also the coastal forest or 'bush', as it was called, that included trees such as white stinkwood, white pear, essenwood and yellowwood. By 1866, for instance, there were 9 174 hectares (22 653 acres) cleared in the coastlands.

The extent of deforestation that occurred in North America, so that land could be cleared for agricultural purposes, was enormous. Indeed, Williams has described the United States as a 'classic example of land transformation through forest clearing'; he estimates that a possible 46 million hectares (about 113 58 million acres) had been cleared before 1850.<sup>12</sup> Settler records describe cleared land as 'improved' land, thereby indicating the negative terms in which the natural vegetation was seen. The settlers therefore viewed their activities in heroic terms as they busied themselves in 'taming the wilderness'. Similarly, in Australia, the eucalyptus forests of the southern and eastern parts of the continent covered land most sought after by agriculturalists. By 1900 these forests had been cleared to such an extent that they were less than half their original estimated size.<sup>13</sup>

Indigenous vegetation was also destroyed to provide fuel. Settlers needed fuel both for their domestic use and for fuel-burning industries. The demand for fuel in Natal was concentrated in the two main towns, where thousands of colonists lived and where light industries such as limeburning and brickmaking were based. Settlers collected their fuel from the local environs of the towns and in both cases the local municipality had to step in to protect the town bush from being denuded. Obviously, as the population and the amount of steam-driven machinery in the Colony increased, the demand for fuel became even heavier, enabling some settlers to make their living from selling fuel in the capital.

In North America, because of the cold climate, the fuel demands of the settlers were

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<sup>12</sup> M. Williams, 'Ecology, imperialism and deforestation' in Griffiths and Robins (eds.), *Ecology and Empire*, p. 172.

<sup>13</sup> *Ibid.*, pp. 173-4.

high. Cronon has estimated, for example, that in 1800 the New England settlers cut down eighteen times more wood for fuel than for lumber.<sup>14</sup> As towns grew, farmers in the 1840s found that selling fuel to towns became a lucrative business.<sup>15</sup> Ecologically, the destruction of the forests for fuel and lumber led directly to increased flooding, for the water was no longer held in the soil and so the run-off was rapid.<sup>16</sup> In Australia, the warmer climate reduced the demand for domestic fuel, but even so vast amounts of timber were cut to provide for settler needs.<sup>17</sup>

Between 1845 and 1870 the number of stock animals feeding on natural grazing in Natal increased enormously, while the number of buck decreased. This had a deleterious effect on the grasslands of the Colony because stock animals, such as sheep and cattle, are selective grazers, whereas the wide range of buck found in Natal in 1845 included browsers and unselective grazers. It is possible that the introduction of so many stock animals initiated changes in the composition of the veld, but we do not have definite proof of this during the period under consideration. There is no evidence either that the stock animals caused soil erosion through trampling and killing off the natural vegetation.

As the bison were shot out from the Great Plains of North America, the settlers replaced them with vast numbers of sheep and cattle, all feeding on the natural grazing. Inevitably, the stock trampled, ate and transformed the prairie grasses.<sup>18</sup> In Australia, the effects of introducing hooved stock animals to a continent that had never known them were disastrous for the natural, nutritious pastureland.<sup>19</sup> It lasted only about six

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<sup>14</sup> Cronon, Changes in the Land, p. 120.

<sup>15</sup> Merchant, Ecological Revolutions, p. 192.

<sup>16</sup> Cronon, Changes in the Land, pp. 124-5.

<sup>17</sup> Williams, 'Ecology, imperialism and deforestation', p. 175; S. Dovers, 'Still discovering Monaro: perceptions of landscape', in S. Dovers (ed.), Australian Environmental History: Essays and Cases (Oxford, 1994). p. 130.

<sup>18</sup> Beinart and Coates, Environment and History, p. 58.

<sup>19</sup> See Rolls, 'The nature of Australia', pp. 38-40, for this and the rest of the information in this paragraph.

years, killed off as the animals' hooves hardened the soil and their teeth ripped at the grass leaves. Inferior grasses took over and thrived in the new conditions. The hardened soil could not absorb water easily and so within twenty years there was evidence of soil erosion in the areas where stock concentrated.<sup>20</sup>

All three settler societies were responsible for introducing plant species into the colonies. Most of these were plants of economic value that were deliberately imported. In Natal, settlers experimented with crop species such as sugar cane, cotton, arrow-root and indigo; they grew fruits such as apples, pears and pineapples; and planted timber and ornamental trees like oak, blue gum and willow. They also inadvertently introduced the burr weed, the burrs of which stuck in the wool of sheep and lowered its market value.

In the northern coastal states of North America, imported grains were grown from the early days of settlement while cotton, sugar, tobacco, indigo and rice flourished in the southern states.<sup>21</sup> Inevitably, with the new crops came weeds. Even as early as 1672 there were already at least twenty different types of weeds in New England, including dandelion and nettles; from there they spread across the plains.<sup>22</sup> Seeds of numerous kinds were taken into Australia right from 1778 and by 1803 over 200 foreign plants had been introduced into New South Wales.<sup>23</sup> The worst of all the plants was the prickly pear. Introduced in 1839, without its natural predator, a caterpillar, the plant went wild and covered vast areas with impenetrable growth. By the 1880s it was declared a noxious weed.<sup>24</sup>

There were several reasons why the Natal settlers reduced the number and variety of animals in the Colony. They eliminated some of the predators and shot other animals

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<sup>20</sup> Bolton, Spoils and Spoilers, pp. 83-4; Dovers, 'Still discovering Monaro', pp. 131-3.

<sup>21</sup> Beinart and Coates, Environment and History, pp. 54-5.

<sup>22</sup> Cronon, Changes in the Land, p. 143.

<sup>23</sup> *Ibid.*, p. 115.

<sup>24</sup> Bolton, Spoils and Spoilers, p. 86.

for trade articles. Through their demand for food and sport, they accounted for many head of game. Inadvertently they killed off other animals by destroying their habitats. Further, their interest in the ideas of the Acclimatisation Society led them to export certain live animals from Natal while attempting to introduce one animal species into Natal.

The larger predators were deliberately eliminated by the settlers of Natal because they threatened settler lives or those of their livestock. As a result, by 1860 crocodiles were no longer seen in the rivers near Durban; lion had disappeared from the coastlands and the midlands, and retreated towards the Drakensberg; while leopard managed to survive only in the thick forests. By the mid-1860s, the settlers' need to kill animals for sport and food had caused them to thin the buck population appreciably. The predators, now feeding on diminishing populations of their natural prey, resorted to eating the settlers' livestock on an increasing scale. Consternation over this issue led to the introduction of the Noxious Animals Law discussed in Chapter 2. It seems very probable that the rewards stipulated in the law intensified the scale of human destruction of predatory animals in Natal for, according to one record, there were few leopard, hyena and jackal left in the Colony by 1867.<sup>25</sup>

The killing of the livestock predators occurred in other settler societies too. In North America, coyotes, wolves, eagles and grizzly bears were all targeted as 'varmints' and great numbers were shot out or poisoned.<sup>26</sup> Bounties were put on their heads from the earliest settler days and the extermination of the coyote, in particular, was carried out with what Worster has described as a 'concentrated moralistic fervor'.<sup>27</sup>

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<sup>25</sup> The Natal Almanac and Yearly Register, 1867, (Pietermaritzburg, 1866), unsigned article on p. 215.

<sup>26</sup> Beinart and Coates, Environment and History, p. 24; Cronon, Changes in the Land, pp. 132-4.

<sup>27</sup> D. Worster, Nature's Economy: A History of Ecological Ideas (San Francisco, 1977, second edition by Cambridge University, 1994), p. 260.

In Australia, the natural fauna included no large predators other than crocodile.<sup>28</sup> Even so, the settlers in New South Wales, for example, conducted a campaign against 'noxious animals' that ate the pastures, crops and stock.<sup>29</sup> The first legislation against such animals was directed against dingoes in 1852; thereafter, measures were created against marsupials and other 'noxious animals'. As in Natal, blood-money was paid out to hunters producing the appropriate paw, tail, scalp or talons. The elimination of most of the dingoes by 1860 allowed the kangaroo population to thrive,<sup>30</sup> which is a good example of Merchant's point that when humans alter the environment, nature responds through ecological change.<sup>31</sup> Over the last few decades of the nineteenth century, literally millions of kangaroos and wallabies, thousands of opossums, kangaroo rats and eagles, and hundreds of wombats were killed. The impact of such large scale extermination campaigns would clearly have had a devastating impact on the Australian fauna.

There was no understanding then, as there is now, of the role that predators play in nature.<sup>32</sup> Through modern ecological theory we know that predators are needed to maintain a stable herbivore population. Without this check a continually increasing herbivore population is in danger of over-grazing the veld and as a result eventually dying of starvation. Lion, leopard and jackal all feed on buck and hares while hyena, being scavengers, clear up carrion. Larger crocodiles also feed on herbivores, such as waterbuck. During the early colonial period in Natal the settlers completely upset the existing ecological balance of the fauna. They not only killed off as many big predators as possible, but they also thinned out the population of buck, the natural food of the predators. Not surprisingly the remaining predators turned to the settler livestock as a

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<sup>28</sup> T. Flannery, 'The fate of empire in low and high-energy systems' in Griffiths and Robins (eds.), Ecology and Empire, p. 51.

<sup>29</sup> See Hancock, Discovering Monaro, pp. 113-4, for all information in the rest of this paragraph.

<sup>30</sup> E. Rolls, 'More a new planet than a new continent', in Dovers (ed.), Australian Environmental History, p. 28.

<sup>31</sup> Merchant, Ecological Revolutions, p. 8.

<sup>32</sup> Beinart and Coates, Environment and History, pp. 82-3; See Worster, Nature's Economy, Chapter 13, for a discussion of the ecological values of predators.

food source.

Settlers destroyed certain animals to produce wildlife products. In Natal, the animals shot in significant numbers to produce commodities were elephant, hippopotamus, buffalo, ostrich and maybe crocodile. As a result of intense exploitation, elephants were no longer seen in Natal by the late 1860s, while sightings of the other four species were very rare.

Heavy exploitation of particular animals for trade commodities also occurred in the other settler societies under consideration. Just a few examples will be cited to make the point. While crocodiles in Natal may have been shot to satisfy a whim of fashion, the fate of the beaver in North America was definitely decided thus. From 1600 onwards beaverskin hats were fashionable in Europe; as a result, beavers were trapped in such numbers by Native Americans and fur-trappers that they were almost eliminated.<sup>33</sup> Then through a sudden change of fashion in the 1830s, when beaverskin hats were replaced by silk ones, the beaver got its reprieve!<sup>34</sup> Buffalo, too, were shot out practically to extinction to provide buffalo robes and later, in the 1870s, leather for boots.<sup>35</sup> In Australia, the first major slaughter of its wildlife was directed against whales and seals.<sup>36</sup> Their oil was used both as a lubricant in industry and for lighting in urban areas. Beginning in 1798, the slaughter of innumerable seals off the south coast meant that within thirty years there were insufficient left to make the industry worthwhile.

Wild animals were a source of food for the first generation of colonists in all three of the settler societies. In Natal, birds and buck were commonly killed for food by both the townspeople and rural folk throughout the 1850s. By the 1860s, however, it was evident that the populations of these sought-after animals were much reduced, especially around the areas of heaviest settlement. Local farmers were sufficiently established by then to

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<sup>33</sup> Merchant, Ecological Revolutions, pp. 42-3; Cronon, Changes in the Land, pp. 105-6.

<sup>34</sup> Beinart and Coates, Environment and History, p. 21.

<sup>35</sup> *Ibid.*, p. 22.

<sup>36</sup> Bolton, Spoils and Spoilers, pp. 49-54, for the information in the rest of the paragraph.

kill off surplus livestock as a protein supply for the towns. The same situation arose in North America, where early settlers subsisted on wild animals while conserving their livestock; later generations did not have the same use for game.<sup>37</sup> In Australia, kangaroo, wombat and bandicoot were all killed for meat by hungry first generation settlers.<sup>38</sup>

Settler sport, too, took its toll on the fauna. This contributed to the disappearance of elephant and a decrease in the hippopotamus and buffalo populations in Natal. Of the smaller game, certain buck and birds were also favoured by sportsmen - the very same animals that had been reduced in number because of settler demands for food. Not surprisingly, they received a degree of protection under the Game Law of 1866, simply because they were the animals that the sportsmen liked to shoot. The same situation arose in areas of New England, where deer and turkey, that had once been common, were seldom seen by 1800.<sup>39</sup> Later in the century, the reckless killings of bison on the Great Plains was judged by many to be fine sport.<sup>40</sup> In Australia, the wildlife had also dwindled near the areas of heaviest settlement; on the Victorian side of the Murray River, emus, kangaroos, bustards and quail were greatly reduced in number by about 1850.<sup>41</sup>

Settlers also reduced local wildlife through altering existing habitats. The drainage of the big vleis at Durban, for example, did more than just alter the landform. It reduced the feeding grounds of birds like wild duck and snipe, while deforestation destroyed the nesting and feeding places of other bird life in the port's environs. Just to the north the release, in the late 1860s, of industrial effluent into the Little Mhlanga stream, was responsible for killing off numerous fish in Natal's first case of industrial pollution. Similarly, in New England, habitat destruction occurred through drainage of swamps, and

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<sup>37</sup> Beinart and Coates, Environment and History, p. 23.

<sup>38</sup> Bolton, Spoils and Spoilers, p. 54.

<sup>39</sup> Cronon, Changes in the Land, p. 159.

<sup>40</sup> Beinart and Coates, Environment and History, pp. 22-3.

<sup>41</sup> Bolton, Spoils and Spoilers, pp. 54-5.

the establishment of dams and canals that prevented salmon from going upstream to spawn.<sup>42</sup> The drainage of swamps and wetlands in Australia, as well as the damming of rivers,<sup>43</sup> irreversibly transformed habitats to the detriment of the animals that inhabited them.

Settlers might also wish to alter the existing fauna of Natal by introducing live animals from other regions. They could do this privately or, by the mid-1860s, under the auspices of the Acclimatisation Society of Natal. The only deliberate introduction of live animals besides stock animals and horses occurred in 1861, when some Durban entrepreneurs, the Milner brothers, imported several English pheasants.<sup>44</sup> Their intention was obviously to try to recreate some of the English countryside in Natal through the presence of these game birds. As no further record of these pheasants has been found, it is assumed that they did not breed successfully.

The settler societies in Australia and North America also involved themselves in importing wild animals which they intended releasing. In the 1860s, for example, the Acclimatisation Society of Natal exported live specimens of the natural fauna to Australia, where sister societies existed in Victoria, New South Wales, Queensland and South Australia.<sup>45</sup> Over several decades these Australian Societies imported a wide variety of animals from other countries. Besides songbirds, sparrows, blackbirds, ostriches, hares, and even 336 alpacas from Peru, various animals were introduced specifically for the sportsmen. These included trout, deer and even foxes! Other than rabbits few of these animals survived. The rabbit population, however, had bred to plague proportion by 1900. In North America, settler importation of wild animals began as early as 1846. Interest was focused entirely on exotic birds. Over the next fifty years,

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<sup>42</sup> Cronon, Changes in the Land, pp. 151, 155.

<sup>43</sup> Rolls, 'The nature of Australia', p. 41.

<sup>44</sup> Natal Mercury, 16 May 1861.

<sup>45</sup> See Lever, They Dined on Eland, Chapter 13, for the information on the Australian Acclimatisation Societies in this paragraph; Hancock, Discovering Monaro, pp. 115-6; Rolls, 'The nature of Australia', p. 41.



although considerable numbers of songbirds from Europe were imported, few survived.<sup>46</sup> In Oregon, for example, of fifteen species introduced in 1896, only one became successfully established.

From the above discussion it is clear that all three settler societies profoundly disturbed their local environments, causing them to be irreversibly transformed. In an attempt to conserve resources, restrictions on activities such as hunting and timber-cutting existed in both North America and Australia.<sup>47</sup> In Natal, between 1853 and 1868 legislation was made that affected the environment in different ways, with the timing and control of the laws providing some sort of scale of how the administration valued the different resources. In general, however, the laws failed because Natal's cash-strapped administration could not afford the personnel needed to implement them. The first twenty years of colonial rule saw legislation on timber, the eradication of the burr weed and on grass-burning. Despite this, the colonial forests were seriously denuded by 1870, and the burr weed had not been eradicated. The first laws concerning animals date from 1866. While the noxious animals law was directed against predators and encouraged their destruction, the game law and the laws on fishing were aimed to give a measure of protection to certain animals. By then, lion and elephant had disappeared; leopard, hippopotamus, eland, hartebeest and ostrich were seldom seen; and the populations of numerous species of buck and birds had dwindled alarmingly. Certainly, the game law came too late to preserve Natal's fauna.

Unlike the settlers of North America and Australia, those of Natal were always vastly outnumbered by the population of earlier inhabitants who were Iron Age farmers. Although there are no population records for the Africans in the first few years of colonial rule, the rough figures available for 1855 onwards show an enormous increase. In fifteen years the African population grew from about 107 600 to roughly 240 600, while the white population, by 1870, was only 18 000.

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<sup>46</sup> Lever, They Dined on Eland, pp. 183-8.

<sup>47</sup> Beinart and Coates, Environment and History, pp. 27, 42; Bolton, Spoils and Spoilers, pp. 98-102.

Many of the Africans lived on locations demarcated by the colonial government exclusively for them. The white administration can therefore be held responsible for environmental changes that the Africans caused in the designated locations. Unfortunately, there is virtually no evidence, in the period under consideration, concerning the impact on the environment of African production patterns, as modified by the colonial system. Because the locations lay in a variety of regions, from the foothills of the Drakensberg through the dry Thukela valley to the coastlands, the impact of the Africans on these regions was not uniform. One can speculate that where overcrowding occurred, and where pre-existing patterns of transhumance were disrupted by the establishment of boundaries to the locations, access to good grazing land might well have been reduced, and so the marginal land might have had to be used. This would have led rapidly to the environmental deterioration of dry regions, such as the Msinga area, where the barren river valleys were not suited for dense human settlement. It is possible too, that, as conditions became more crowded, over-hunting of animals for the pot occurred with deleterious effects on the buck population in localized areas.

On the question of the destruction of indigenous vegetation in the locations and missions for hut-building and fuel, there is at least some evidence. The fact that in 1867 the Natal Native Trust found it necessary to appoint a forest conservator in the Zwartkop location to control the cutting of fuel and timber by Africans, indicates that the demand placed on these resources had already led to heavy exploitation in this particular location. In 1869, the government became aware of much of the same pattern of extensive damage to forests in locations down the south coast, and placed a conservator in charge of the forests of the Umlazi location. It is probable that intensive exploitation of bush and forests in the other locations had also taken place by 1870, although we have no documentary evidence of this.

Despite the destruction of so much of the natural flora and fauna in Natal by 1870, there were some hopeful signs for the future. The settlers who formed the Natural History Association in 1868 were prominent men in the Colony, from the Lieutenant-Governor, as President, to the council members that included T. Shepstone, P. Paterson (the Colonial Engineer) and P. Sutherland (the Surveyor-General) among others. Their

awareness and concern was to an extent translated directly into positive action to slow down the environmental transformation. The government, realising the need of personnel to enforce legislation, had appointed forest conservators in two of the locations. It had also formed the Harbour Conservancy Board in 1867. The Board made suggestions concerning the protection of fish in the bay, and in 1872 it alerted the administration to the state of the bay-side vegetation. This information led directly to the appointment of forest conservators for the bay, the 'Drakensberg Slopes', Fort Nottingham and the County of Alfred.<sup>48</sup> Within a few years a further forest conservator was appointed for Weenen County, and also a Xanthium inspector.<sup>49</sup> The government also authorised several commissions to enquire into environmental topics such as the pollution of streams in the coast district in 1875,<sup>50</sup> as well as the condition of the forests.<sup>51</sup> Private individuals, too, contributed to saving the diminution of forests near Pietermaritzburg by growing and felling exotic species such as gum trees, and selling the wood to the brick-makers of the town.<sup>52</sup> The momentum for all these developments had been generated by the settlers before the end of 1870.

Before the advent of white settlers, human induced alterations to the natural environment of Natal had been occurring slowly for at least a thousand years. With the establishment of the Colony in 1845, the attitude and technology that the British settlers brought to bear on the environment quickened the pace of change and broadened the spectrum of human impact. Consequently, within a scant twenty-five year period, large parts of Natal were transformed. The game was practically all gone, diminished in both number and variety. In its place, thousands upon thousands of stock animals grazed off the natural pastures. Much of the indigenous vegetation had been destroyed, and numerous alien plant species brought into the Colony. While details of the settlers'

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<sup>48</sup> Blue Book, 1872, p. M 40.

<sup>49</sup> Ibid., 1874, p. M 46.

<sup>50</sup> C.S.O. 1910, no. 116, Colonial Secretary to Lieutenant Colonel Durnford, 6 May 1875.

<sup>51</sup> The Forest Commission was appointed in 1878.

<sup>52</sup> Natal Witness, 24 June 1870.

activities discussed in this thesis are peculiar to Natal, the nature of their impact was not. Broadly speaking, what occurred in Natal under the impact of white settlement happened too in North America and Australia. In all three regions the changes conformed with Merchant's definition of a 'colonial ecological revolution'. According to her schema, the transformation would then be followed by a 'capitalist ecological revolution'.<sup>53</sup> In southern Africa, the discovery of diamonds in the late 1860s initiated such a revolution, the effects of which were felt even in Natal. By 1870, therefore, the first phase of environmental history in the Colony of Natal was over, and the next era was about to dawn.

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<sup>53</sup> Merchant, Ecological Revolutions, p. 2.

APPENDIXTypes of wood needed for wagon parts.

(Compiled from the Garden Papers, pp. 1206-7.)

axles	assegai or red milkwood
axle trees	white ironwood or black ironwood
bank plank	yellowwood
disselboom	ironwood
felloes	white pear
naves	flat crown
side boxes	yellowwood or stinkwood
sides of wagon	essenwood or black stinkwood
skeyes	milkwood
spokes	red milkwood or assegai
uprights for wagon sides	stinkwood
wagon chest	essenwood
wedges for fixing box to wheels	yellowwood
yokes	stinkwood or wild pear

### NOTE ON SOURCES

Although humans have been transforming the environment for thousands of years, it was only in the eighteenth and nineteenth centuries that some observers began to record the process. The publication of George P. Marsh's Man and Nature, which noted the changes he witnessed in the environment of New England, marks the beginning of a conscious environmental historiography.<sup>1</sup> This book was published only in 1864, which is towards the end of the period under consideration in this thesis. It seems safe to assume then that the Natal settlers were unaware of ecological concerns. Certainly, there was no office of origin to consult in the research for this work - no Department of Forestry, or Fisheries, or any similar backbone of records. Instead, material was difficult to gather from very disparate sources.

Work was done mainly in the Natal Archives Depot and in the University Library, both in Pietermaritzburg. Of the government records consulted, the most useful information came from the Surveyor-General's office. From 1856 onwards and for the rest of the period under discussion, the Surveyor-General of Natal was Dr P. C. Sutherland, a medical doctor, a gifted scientist and Renaissance man, if ever there was one. After eventful trips to the Davis Straits and the Arctic, where he made a botanical collection while searching for Sir John Franklin, Sutherland came to Natal.<sup>2</sup> Here he became the Surveyor-General in 1856 and remained so for the rest of the period. In addition to his work as chairman of the medical board in the Colony,<sup>3</sup> he toured Natal as its Surveyor-General, writing his reports with an observant eye. His inclusion of details on forests and game proved invaluable to the researcher, even if his handwriting left much to be desired! He well and truly proved his scientific ability in 1868 when he correctly identified rocks of glacial origin in the present day Ashburton

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<sup>1</sup> D. Lowenthal, 'Empires and ecologies: reflections on environmental history', in Griffiths and Robin (eds.), Ecology and Empire, p. 232; Merchant, Ecological Revolutions, p. 1.

<sup>2</sup> Hattersley, The British Settlement of Natal, pp. 69-70.

<sup>3</sup> *Ibid.*, p. 316.

area and the Mngeni quarry. This was only three years after such rock was first described in India.<sup>4</sup>

Of the non-government sources, the newspapers consulted provided a useful framework of events in the Colony, while the records of the lives of ordinary settlers in the Bird Papers proved valuable for personal details. There are many inequalities in the sources. Newspapers concentrated on news of the two main towns and it was very difficult to find information on the rural areas. While the records of the Durban municipality exist and were useful, many of those of the Pietermaritzburg municipality were burnt in the Town Hall fire of 1898. This made it impossible to discuss the municipality and the restrictions it might have made relating to the environment in any degree of detail. As for the far north, very little information could be found. The inequalities in source material are reflected in the chapter lengths. The sources used are mostly those emanating from white settlers and therefore reflect their attitudes and activities.

Once the primary research on Natal was completed, it needed to be placed within a larger framework of ecological concerns. Although ecology became a recognised discipline as far back as the 1920s,<sup>5</sup> it was only in the 1970s that environmental history established itself as a sub-discipline. Over the many years that the research for this thesis has been pursued, an interesting secondary literature on settler societies has sprung up. Although none of it deals specifically with Natal, it does concern itself with similar situations. The insights gained from works such as G. Bolton's Spoils and Spoilers and W. Cronon's Changes in the Land, have helped to provide a useful perspective for, and an edge to, the primary research on Natal.

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<sup>4</sup> King, The Natal Monocline, p. 93.

<sup>5</sup> Lowenthal, 'Empires and ecologies', p. 232.

## LIST OF SOURCES

Categories into which the list of sources is divided:

### A. PRIMARY SOURCES

1. Manuscript Sources:
  - 1.1 Private Papers
  - 1.2 Unpublished Official Papers
2. Official Printed Sources
3. Unofficial Contemporary Printed Sources:
  - 3.1 Books, Pamphlets and Articles
  - 3.2 Newspapers
4. Later Edited, Annotated and Printed Contemporary Sources
5. Maps
6. Museum Exhibits
7. Pictorial Evidence

### B. LATER SOURCES

1. Bibliographies and Guides
2. Books
3. Articles
4. Theses and Conference Papers

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### A. PRIMARY SOURCES

#### 1. Manuscript Sources

##### 1.1 Private Papers

##### 1.1.1 Natal Archives Depot, Pietermaritzburg

Accession number:	no. 29 Diary of A.H. Jones
	no. 109 Voortrekker Museum
	no. 152 Journal of John Fleming



no. 221 Diary of E. Parkinson  
 no. 254 Reminiscences of G. Lamond  
 no. 255 Narrative of Mrs G. Lamond  
 no. 294 Reminiscences of C. Arbuthnot  
 no. 1323 Sutton Collection

Bird Papers

Bird's notes on the History of Natal  
 Comins J.  
 Dicks J., information supplied by Dicks H.  
 Fannin J.E.  
 Finnemore J.P.  
 Green Rev. J.  
 Griffin H.  
 Griffin S.W.B.  
 Hogg P.  
 John Bird paper  
 Lister W.  
 Lucas G.A.  
 Methley J.E.  
 Middleton W.H.  
 Pistorius C.W.  
 Polkinghorne J.  
 Shepstone J.W.  
 Sparks D., information from his son  
 Wolhuter F.M.

Garden Papers

Hathorne Papers

Hathorn J.P. - Notebook, 1851.

Moreland Papers

Box 2

Journal describing topography, fauna and flora of  
 Natal, 1853.

Shepstone Papers

Volume 1 - Journal

Diaries 1835-1849

Diaries 1851-1865

Shooter J., 'Off to Natal by A Clergyman's Wife' (Typescript, n.d.).

1.1.2 **Killie Campbell Africana Library**

C. Barter Diary.

MS AND 2.08 Anderson A - Papers

MS 1637, 1649, 1651, 1666, 1670, 2537

MS NAT 5.09, 2534-3539

MS NOU 2.092 Nourse J.

1.1.3 **Natal University Library, Pietermaritzburg**

Windham J., 'The Natal Diaries of Mrs J. Windham' (Typescript, n.d.).

1.1.4 **Private Collections**

W. MacKenzie - Diary

H. Pennefather - Diary

R. Plant - Diary

1.2 **Unpublished Official Papers**

1.2.1 **Natal Archives Depot, Pietermaritzburg**

Attorney General's Office

AGO 1/10/1 - 1/10/4

Blue Book for the Colony of Natal, 1845-1849.

Colonial Secretary's Office

CSO 1-348, 349, 406-7, 420, 1910, 1946-1960, 2236-2257, 2274-2280, 2295-2309.

Government House

GH 28, 48, 1210-1217.

Natal Government Notices

NGN 1-23

Pietermaritzburg Corporation

PC 1/1/1-1/1/3

Surveyor General's Office

SGO 111/1/1-111/1/20

111/3/1-111/3/6

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Secretary for Native Affairs

SNA 1/1/1-1/1/20

1/3/1-1/3/20

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1/8/1-1/8/8

3/4/1

### 1.2.2 **Durban Archives Repository**

Durban Town Clerk's Report Book (June 1865-February 1868)

Minutes of Durban Town Council

Volume August 1854 - August 1856

September 1856 - September 1858

October 1858 - November 1861

Volume 1 - 6

Office of the Durban Town Clerk

File 14a, 51

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## 5. **Maps**

### 5.1 **Natal Archives Depot**

Map D 94.

Map E 115.

Map 21

### 5.2 **Killie Campbell Africana Library**

KCA 95, Map of Capt W.T. Haddon, 1835.

## 6. **Museum Exhibits**

### 6.1 **Voortrekker Museum**

Settler artefacts

## 7. **Pictorial Evidence**

### 7.1 **Local History Museum, Durban**

James West - View of Durban Bayhead from Bluff, 1856.

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