Thematic forest history and heritage assessment (non-Indigenous) UNE/LNE CRA Regions

A report undertaken for the NSW CRA/RFA Steering Committee

THEMATIC FOREST HISTORY AND HERITAGE ASSESSMENT (NON-INDIGENOUS) UNE/LNE CRA REGIONS

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A report undertaken for the NSW CRA/RFA Steering Committee project number NA 29/EH

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Report Status

This report has been prepared as a working paper for the NSW CRA/RFA Steering Committee under the direction of the Environment and Heritage Technical Committee. It is recognised that it may contain errors that require correction but it is released to be consistent with the principle that information related to the comprehensive regional assessment process in New South Wales will be made publicly available.

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The project has been overseen and the methodology has been developed through the Environment and Heritage Technical Committee which includes representatives from the NSW and Commonwealth Governments and stakeholder groups.

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EXECUTIVE SUMMARY

This report has been prepared for the joint Commonwealth/State Steering Committee which oversees the comprehensive regional assessments of forests in New South Wales.

The comprehensive regional assessments (CRAs) provide the scientific basis on which the State and Commonwealth governments will sign regional forest agreements (RFAs) for the major forests of New South Wales. These agreements will determine the future of the State's forests, providing a balance between conservation and ecologically sustainable use of forest resources.

This report was undertaken to document past human interaction with forested environments to help prioritise, guide, inform and stimulate research design and questions for investigative research and field work.

A glance at the map of the Upper and Lower North East CRA Regions shows that a considerable proportion of land is delineated into four main categories - National Park, Wilderness Area, State Forest and Timber Reserve. Apart from the Hunter Valley lands and the western side of the Tablelands, and the Hastings and Manning River valleys, the extent and consistent covering of the forests is still a remarkable presence on the face of this part of New South Wales.

In order to trace the history of these forests, how they have fared over the 1ast two hundred years, we have followed a series of thematic frameworks. They can be grouped broadly into two categories: The history of the State bodies which had the responsibility for guardianship of these forested areas, the Forestry Commission (now named the State Forests of NSW), and the National Parks and Wildlife Service, a relative new-comer on the scene. We have also described the Landscape where these forests are located, the topography they occupy. The System of Land Tenure, and its influence on the areas has been addressed briefly, and the pivotal role of the towns. A chapter, too, touches on the philosophies that served to shape the forests and link them into the emerging Australian development, and into the world economy. The conservation movement changed the intellectual climate surrounding the forests. These themes and their chapters form the background of the study.

Then there is the environment itself, and the sites within the Forests and Parks that have a meaning conveying a sense of their history. We have looked at the early seminal periods of convicts and timber-getting, cedar and the penetration of the North Coast, at the dispossession, contact and continuity among the Aborigines. We have tried to encapsulate the timber industry as it utilised forest resources. We have looked at the presence of mining in the forests, in the late l9th century, but still there from time to time. We have tried to say something about the women and children and their lives which complemented the more 'heroic' figures of the active timber getters. Burials in the forest have not been ignored.

Finally, the sites themselves: on the whole, they are not impressive, or beautiful; they are not highly distinctive or rare. But they still have a tale to tell about an important period in Australia's development, a period not properly considered in the past.

The project has included an assessment of a selection of sites identified through the writing of the thematic history or the community workshops as being of historic value (UNE sites are listed in Appendix 2, LNE in Appendix 3). Many more such sites exist within forested areas of the region than it has been possible to encompass within the time frames of this project. It is hoped that those which are included will indicate the range of sites which exist and stimulate their assessment and active management.

The first part of the Thematic Forest History set the stage for the second part, the field trips, and the third part, where the sites inspected, and the communities visited, have contributed more detail and more human interest. In the end, the patterns are not enough, the people, the names and the memories have to furnish the imagery, and the

places themselves point to the themes in the environmental history.

EXECUTIVE SUMMARY

1. STATE FORESTS - THEIR HISTORY IN NSW

1.1 EUROPEAN CULTURE AND AUSTRALIAN FORESTS

THEMES: NSW HO 9 Environment

AHC HT.03 Developing regional economies

HT.03.03.04.04 Managing forest resources

HT.03.03.04.04.01 Protecting forest resources

From the beginning of settlement there had been restrictions on cutting timber, and the hope of securing good timber to be used in the building of ships for the British Navy had been one of factors cited as a reason for settling Botany Bay in 1788. The pines at Norfolk, however, proved to be unsuitable. The trees closer to home, however, once the prejudices of the first timber-getters were overcome, proved to be eminently suitable for a range of uses.

From the beginning of settlement, too, there were conditions implied and stated, when land was granted. The owner was bound to 'improve' the land. That meant in most cases, he had to fence it to control his animals, cultivate some portion of it, and usually build a dwelling on the site. This imperative was carried on when both urban and rural land was put up for sale after 1831. In the Northern Region, the settlers, to be elegible to stay on their blocks, had to demonstrate their intention by clearing the land, fencing it, and establishing a dwelling place. The Lands Department chief imperative was to settle people on the land, so its Forestry component was not central to its main purpose, and at times, was directly opposed to it.

For instance, in 1857, Williamson, a pit-sawyer of Dorrigo, in order to take up crown land there, to farm in conjunction with his timber skills, (scrub blocks were of 640 acres, or 259 hectares) was instructed by the Government 'to remove the timber within twelve months'. This meant a scramble to comply, and also meant most of the timber was wasted (Vader 1987:70). Helen Hannah has written with some feeling about the people who were encouraged to slash and burn the Comboyne Forests (Hannah 1981:53-59) in the period from 1899 onwards. There are folk tales in every district along the North Coast to parallel these stories. They are stories which are now assuming the force of morality tales.

Another instance of this official policy was the decision handed down by a Supreme Court Judge in 1881, indicating that a settler was required to carry out 'clearing' by ringbarking the trees to give evidence of his intention to stay and work on the land. The trees were said locally to be 'rung', and it was required a certain distance from the creeks (Curby 1993). This requirement remained in place until the 1960s.

In hindsight, the implication of this past destruction can only be deplored. But this regulation of clearing the land persisted until the 1960s when Crown Land was released for farms. Reasons lie deep within the social fabric of European culture. They have been ingrained in the Protestant work ethic, the idea that the 'wilderness' would be productive when it was converted to conventional farmland, mixed up with the romantic idea that country life was preferable to town life, that the 'arcadian' life was the classical ideal. 'Et in arcadia ego,' was accepted in England as a state to be envied, strived for; it was inscribed on monuments in the highly sophisticated rural parks.

In Australia, the idea that 'yeomen farmers' would develop the vacant land, winning virtue as they worked, was grasped by the legislatures of the late 19th century as a means of settling migrants onto farms, and giving them work and a chance in life. It was also used to counter the political powers of the squatting interests. It was largely a fantasy. In England, the enclosures had dispossessed the rural poor. Australia was inheriting a

tradition which had run its course in Europe (See Seddon 1997, Proudfoot 1984:3, Bolton 1981, Lansbury 1970).

1.2 THE TRADITION OF FOREST GUARDIANSHIP

When the English Crown declared sovereignty over the Australian east coast, the land was seen as Crown Land, with the crown retaining custodianship.

Governor Hunter in 1795 was concerned about the wastage of cedar in particular, noticed on the banks of the Hawkesbury River, and made a regulation that the 'King's Mark' be put on all timber on crown land, and offenders prosecuted. Governor King, in 1801, tried to control timber-getting on the Hunter River north from Sydney, and declared both coal and timber procured on the Hunter to be the property of the crown, and licenses were issued. Other regulations were issued over the next few years, and fees made payable to the Naval Office in Sydney, and used for the support of the Orphan schools.

Governor Macquarie reviewed the system in 1811, and duties were payable on imports of cedar from other ports in NSW. By this time Government sawyers camps had been established on the Lane Cove River, and timber was shipped down to Sydney for building purposes. Duty on timber ceased to levied from timber from the Hunter as the timber supply at Lane Cove and Pennant Hills grew scarce, and attention was given to the other species of trees in the Kur-ing-gai forests. Cedar-getting extended down the South Coast in 1826, and Hasting River cedar arrived from the North Coast about the same time, when the convicts' secondary detention centre was established at Port Macquarie. Demand grew for the beautiful, scented wood, and the search for it extended ever further.

Cedar was highly prized in Europe too, and became a export staple commensurate with wool in the early decades of the colony. The export trade in fact drove the search for cedar and gave it great importance. Other woods too, as cedar was getting scarce and hard to find, hoop pine, tallowwood, and hardwoods were used for export.

By 1826 a halfpenny duty was briefly imposed on cedar. In 1835 again, a license was required to cut cedar on crown lands. This was re-enforced in 1839.

In the meantime, however, the effects of the British Act of Parliament in 1831 to allow lands in the colony to be thrown open for sale, rather than for grant of lease, was fuelling the colonists' demand for land within the Limits of Location (the Nineteen Counties). The North Coast was not included within these limits to this time. Outside the Limits of Location Squatting Leases were given to men with more capital resources, who could, it was felt, invest more in establishing pastoral stations. Very large areas of land were held under lease, mostly used for sheep grazing on the Tablelands, and for cattle on the coastal meadows north from Port Macquarie. Cattle could be run in conjunction with Timber Licences in many cases.

Timber Licenses over the years from 1851, 1861, 1864, 1866, 1875 and 1878 were concerned mainly to provide a modicum system of control over timber-getting, and to collect the duties and fees due to the crown. They were not primarily conceived as a means of retaining the forests for the distant future. The regulations were imposed to provide bulwarks against encroachment by farmers, to preserve fine stands of timber for future harvesting when they were ready.

Full Responsible Government was granted to NSW in 1855. An important local land act was passed in 1861, followed by regulations in 1866. Timber Licenses were issued for a fee for occupiers of Crown Lands to cut timber whether held by lease or otherwise. One other restriction was to forbid cedar being cut under two feet in diameter, another was that the bark was not to be removed from standing trees. Whether these regulations were respected is not known.

The Crown Lands Occupation Act of 1861, however, was a signal for the occupation of North Coast lands for free selection. It was a major turning point in the history of the North Coast, and had a major and disastrous impact on the region's forests.

1.3 THE FORESTRY BRANCH

In 1876, Forestry Conservancy was established as part of the Occupation of Lands Branch under the Secretary for Lands. One of its first and most famous Inspector of

Forests was the poet Henry Kendall appointed in 1881. The job was too demanding, and killed him within a year. Forestry became a Department after 1890, and was then shuffled between Mines and Agriculture.

A most significant series of reservations on the North Coast, however, was announced before 1876 (Grant 1988:ch3). These were fourteen reserves totalling 190,235 hectares in the Clarence Pastoral District announced in 1871. The Branch had a meagre staff of under ten people spread very thinly, so supervision was almost impossible (Grant 1988:27-28, 61).

The 1876 act was, however, accompanied with the provision for Class A State Forests, and Class B timber reserves. Class A State Forests included lands where large areas could be allotted for continuous removal of matured timber. Large blocks were subdivided into areas up to 5 square miles (259 square kilometres), and smaller ones of 160 acres (65 hectares) granted for three years for a royalty payment. Minimum girths were set for trees that could be felled, and marked with a registered brand. Forestry had the task of supervising these regulations. Class B timber reserves were for localities where timber demand was small and confined to local requirements.

This classification system was continued and expanded in the Crown Lands Act of 1884. State Forests were generally lands containing valuable timber within 20 miles of navigable water or railway. Licenses could be sold by auction or tender, and royalties paid for different timbers removed. Timber Reserves Class A, B, and C were associated with local timber mills. Permits were required, and minimum girths set. Attention was paid to Wattle Bark harvesting for tanning; quarry licenses could be issued; sites for sawmills licensed, and land leased for agistment of stock. A year later, 1885, further details were added: mining prop permits were issued, thinning out of trees could be authorised.

J. Ednie Brown was appointed Director General of Forests in 1890. He was a Scottish forester from Western Australia. He soon realised that no reform was possible without new legislation. There was a marked hostility to forestry in the depression climate in the nineties (Carron 1985:7).

Revenues from forest products rose to £100,796 in 1906 to £65,020,000 in 1987-88. This revenue was offset against costs for £33,278 in 1906 and £52,581,000 in 1987-88 (Grant 1988: ch2).

1.4 FORESTRY COMMISSION 1909

A Royal Commission of Inquiry of Forests was conducted in 1908. They found that 'Probably no section of business under Government control has experienced greater vicissitudes in management or less consideration than that connected with our forests. No attempt appears to have been made to lay down a policy of management... The protection of the forest domain appears to have been nearly always subordinated to the policy of settlement' (Royal Commission 1908 in Grant 1988:22).

An Act to establish a Forestry Department, distinct from the Department of Lands, was passed in 1909, with R. Dalrymple-Hay as Director General, but Forestry was still a minor department under Agriculture, and finances were meagre. Dalrymple-Hay became the Chief Commissioner when the organisation was changed to the Forestry Commission in 1916. This signalled a change of attitude. The Commission under his direction was instrumental in saving much valuable forest resources by reserving them as State Forests or Timber Reserves. He adopted a policy of regeneration of eucalypt stands by seedlings or coppicing.

At that time it was believed that 'most of the eucalypt forests regenerated naturally and the more heavily they are logged and disturbed the better they regenerate' (Grant 1988:76). This philosophy was followed so steadfastly in forestry in NSW, that it is instructive to repeat it here.

> A fully-stocked mature forest usually has a scarcity of regeneration of young trees as there is nor room for new trees to grow. It is only when the mature trees are removed by logging, ringbarking, or occasionally destroyed by severe bush fire that areas ranging from as small as one tenth of a hectare to several hundred hectares are made suitable for young trees to grow. Most virgin forests have a large proportion of trees that are over-mature and unsuitable for the timber industry. It is necessary to get rid of these by ringbarking or felling. Then conditions are favourable for eucalypt regeneration, that is, plenty of sunlight.

This form of silviculture treatment has been part of normal Forestry practice since 1911, when it was tried for the hardwood timbers of the North Coast Reserves - at

Grafton, Taree, Wyong and Cessnock. Regeneration is mainly from seedlings and coppicing. Regrowth forests of blackbutt were established at Kendall, Whian Whian SF and elsewhere. Flooded gum stands, blue gum, grey gum, grey ironbark, white mahogany, brush box, tallowwood, and turpentine, are scattered widely on the North Coast. Cedar however has not regenerated.

Hay retired in 1926, and N.W. Jolly was appointed to head the Commission. (A memorial grove to commemorate Jolly's contribution was later to be established by the Commission near Dorrigo - Heritage ID 3911771, Appendix 2). He pressed for coniferous afforestation. There was a dearth of native softwoods, and imports were increasing. A planting program was begun, but the depression cut-back stopped the project. However some effort and funds were diverted in the early thirties to cooperating with the Prisons in the formation of Prison Afforestation Camps; as well, unemployment relief work programs were organised on a large scale.

In 1928 the Third British Empire Forestry Conference was held in Australia. Opinion there suggested that an annual planting rate of conifers should be increased to 1000 hectares a year (Carron 1985:12). E.H. Swain succeeded Jolly as head Commissioner. He set about to reform the operations of Forestry, and implementing a system that ensured that the foresters, bush operators, and saw-millers were all fairly paid for their contribution to the growing, harvesting and marketing of forest products. He saw the three parts of the industry not as competitors, but as complementary.

After the war, the Forestry service began to see itself as a conservation agency as well a mere revenue-collecting agency. Silviculture management was consolidated, new techniques, like aerial photography were used and better fire protection and road works were organised. Timber harvesting was stepped up. There was reform in the method of collecting royalties.

Back in 1916, it was stated in the Act that the chief objective of the Commission was that it

> Should conserve and utilise the timber on Crown Lands to the best advantage of the State...and provide adequate supplies of timber from Crown-timber lands for building, commercial, industrial, agricultural, mining, and domestic purposes' (Carron 1985:22).

The nucleus of the state forests was established by the 1916 Act, 2 million hectares of reserved forest within three years.

The war had made it more obvious that, while the native forest was mainly composed of heavy, hard, durable woods, it lacked the softer more easily worked woods, and there was considerable demand for this wood met by imports from overseas. Management intensified, and roads constructed into hitherto inaccessible forests in order to facilitate supply.

A Timber Resources Inquiry was conducted in 1950. A starting point was a survey to identify the extent, location, ownership, structure and condition of the native forest. The capacity of the native resource and the demands for wood in both the immediate and longer future were considered. It became clear that the crown reserve could not meet future demands either in quantity or kind, and it was being depleted faster than it could be replaced. The answer was seen to be a vigorous soft-wood program. The Commission also began exercising much more stringent controls over harvesting by 'tree marking'.

In 1951 the Commission began the compilation of working plans (management plans) for the coastal eucalypt forests based on more sophisticated methods of assessment and aimed at prescribing a yield that could be sustained (Carron 1985:24). An essential feature was 'silvicultural treatment'. Swain had advocated this for the North Coast forests back in the thirties. Another name was 'timber stand improvement'.

Wild fires in the forests had resulted in lack of regeneration and poor distribution of timber size classes. In NSW bad fires had occurred in 1916, 1926, 1939 (the year of the disastrous Victorian fire) and 1951-52. Staff of the Commission in that year attended more than a thousand fires in State Forests, and more than one seventh of the forests suffered. Again, 1957-58 was even worse. After these fires the Commission moved to fuel reduction practices of broad-scale burning (Carron 1985:27).

In 1972, the State Government passed two pieces of legislation on forestry. These re-enforced the primary objectives of Forestry as the growing and harvesting of wood to meet the timber needs of the state's industries. As well as that the Commission's charter was 'to husband and conserve the supply, to protect it and enhance it.' Its role was dependent on the regulation and control of 'working forests'. The milling industry on the other hand became more reconciled to 'Crown quotas'.

1.5 NATIONAL PARKS & WILDLIFE SERVICE ESTABLISHED

An attack on the Forestry Commission, however, was to come from another direction altogether. In 1967 and 1974 Tom Lewis engineered the National Parks and Wildlife Acts through the NSW parliament. Attitudes about nature conservation were changing; a ground swell of public opinion was set to swamp traditional forestry, and turn it into the enemy.

There was a long established conservation movement in NSW, National Parks had been declared from 1874 when the Royal National Park was dedicated south of Sydney. Some decades were to pass, however, before some more National Parks were declared. In the 1930s some parts of the Blue Mountains were listed, Bouddi, Patonga Reserve at Brisbane Water, and Kurnell Peninsular were later to become nucleii of larger reservations. In the forties there were more; Beecroft Peninsular, Heathcote, Tallowa, and Snowy National Park. The fifties were marked by Brisbane Water and the Warrumbungles (Goldstein 1988: 57).

The quickening interest in conservation on all fronts, in the built environment from the early sixties in Sydney, was closely followed by more organisation of nature conservation bodies. It was a city-based movement to start, but it spread to the north coast quickly, especially when alliances were formed where locals had already been disappointed by the failure to establish a National Park on the Nightcap Range, which had been long admired as an exceptional forested area.

Terania Creek Logging Inquiry was a flash-point. It mobilised both local people and city-based conservationists into a movement which captured headlines during the seventies. The level of debate became increasingly sophisticated, with respected scientists joining in: V. & J. Routley, Len Webb of the CSIRO, Harry Recher of the Australian Museum, Dr Fox of the Herbarium, and Peter Hitchcock of the National Parks & Wildlife Service.

Forestry drew fire when it published its Indigenous Forests Policy in 1976. This disclosed the intention to log to the limits of economic accessibility on the north coast escarpment's hardwood forests. Forestry, after years of trying to conserve forests for public benefit, found that it rapidly lost the moral high ground.

After 1980, the Environmental Planning and Assessment Act opened up the possibility of challenging rainforest logging in the Land and Environment Court. Furthermore, there was growing international concern at the destruction of rainforests world-wide. At the Jakarta Forestry Congress of 1978, Len Webb argued powerfully for the conservation of rainforest ecosystems, raising government and popular awareness. A new word had entered the popular consciousness - 'ecology'.

In 1987, a proposal was made by the State government to nominate the remaining NSW rainforests for World Heritage Listing. The rainforests of the North Coast, now transferred from Forestry to the National Parks and Wildlife Service, were more closely examined, and the Nomination was put to ICOMOS in Brussels (Adam 1987 and Proudfoot 1984). In order to fulfil the categories stipulated by ICOMOS, the cultural as well as the natural history of the forests contributed to an extensive enquiry. Aspects of the historical, aesthetic, archaeological, and Aboriginal patterns were included, as well as the natural, botanical, zoological, geological and geomorphological issues.

The forests nominated were the Tweed Volcano Group, the Washpool/Gibraltar Range Group, the New England Group, the Hastings Group and the Barrington Group. Logging had been phased out of these rainforests, and they continue to be managed as National Parks. With these nominations, the National Parks Service stole a march over its earlier rival, State Forestry, and became firmly embedded in the public mind as the premier conservation body.

1.6 REVISED ROLE OF STATE FORESTS

The role of State Forestry is now in the stages of being re-assessed. Its primary purpose of supplying timber for use in New South Wales is still uppermost. But its brief has broadened to include other values such as recreational use, educational use, with more accessibility for the public, and more open and accountable policies. There is also some extension of conservation of forest trees used in urban plantings by Shires and Councils, to treat them more carefully and sympathetically.

The contribution to EIS reports for some of the forests by an archaeologist (Sue Pearson) and a historian (Pauline Curby) is a good start. The formation of an

interested group attracted by three recent Australian Forest History Conferences is another.

1.7 OLD GROWTH FORESTS

It is interesting to see now, in the proceedings of the National Conference on Forest History III (Dargavel 1997) a strong concern for 'old-growth' forests in Australia. 'Venerable' forests, they are called by one contributor (N. Ednacott), another calls them 'primeval' (N. Bonyhady). The feeling seems to be that these forests can testify to the great age of the tree species, and can contribute to the knowledge of a range of botanical, social, geographical and scientific histories.

In an article entitled 'Name and Order in Victoria's Forests' (Dargavel and McRae) the authors have raised some interesting questions. 'An ordered progression of age classes in the forest is the ideal on which the classical theories of forest management rests. The yield of a forest is regulated to a level which can be sustained in the long term by allowing a proper number of trees of each age remain. This proposition is imposed over the more pragmatic way of clear felling, and has been welcomed by the ecologists as an indicator of forest health.

The idea originated among the Swiss and German foresters in the 1870s and quickly became 'the classic' tradition. Working plans were made for each forest, and this scheme was adopted by the British foresters in India. Then the system of classification was introduced into Victoria in the 1920s by Owen Jones the first Chairman of the Forestry Commission there. This ideal, in a transmuted form, had to exist alongside dealing with the exploration of areas for reservation and battling against agricultural interests, which were the most urgent tasks.

In NSW also, it was recognised that the legacy of 19th century lack of management should be addressed, and there was a perceived need to survey and estimate the timber resources of the State. E.H.F. Swain devised a practical forest assessment method by a strip assessment survey as an Australian adaptation of methods adopted by European and American services and lumber firms. It became standard practice in NSW in the 1920s. The first aerial photography survey was used in 1938 in Eastern Dorrigo for the Brooklana Hoop Pine Plantation. Aerial photographs of the eastern part of the state were made, classifying timber stands. Most of the State Forests have now been mapped and timber estimates formed.

Historical sites and features may stand out clearly in some of these surveys, sites like old saw-mill camps, old forest roads, and old mining fields within the forests. Also tree age might be able to be surveyed with more precision and less time spent.

The present management policy is for multiple use and sustained yield for the native forests aimed at ensuring the continued provision of wood, recreation, and maintenance of environmental values 'in perpetuity' (Grant 1988). Recreation as a professed aim is a comparatively new category.

The question of the age of the forests themselves is now being discussed widely. The age of the forest, the age of the trees within it, and its age since logging, are three different things. Our forests in Australia are being compared with venerable forests in Europe where centuries of woodcutting have produced many stable forest ecosystems, which are of the greatest value both as cultural artefacts and as habitats for plants and animals (Rackham 1997:20-21).

It is a possibility that some trees themselves might come to be given an importance as historic items as living national treasures in the near future in Australia. The Wollemi pines are an example. They are recognised as being of immense historic and prehistoric importance, the oldest trees on the planet. It is important also, however, to recognise other old trees of great age, and prevent them being tidied away in logging operations or 'stand improvement'. Another danger, of course, is urban development. But the greatest danger here is from fire, and not enough is known yet about how this affects the tree's longevity and internal habitats. 'Whether some eucalypts, like some oaks, can live for three or four times the average life-span of the species seems not to be known' (Rackham 1997:22).

The role of the natural grass systems in the native forests, too, has yet to be studied in sufficient detail in Australia. The inland forests of the tablelands are sometimes combinations of tree and grass cover. The trees may remain, but the ecosystem has suffered with the importation of exotic grass and weeds, not to mention other rampant pests like blackberries, lantana, privet, and broom. Their introduction is a historical accident which has been disregarded as 'history' or 'culture'.

There is still a crucial role to be played by the State Forests organisation of NSW. In order to grow the trees to be harvested for the innumerable uses in daily life, the forests have to be managed in the most ecologically sensible way from various points of view, including the criteria demanded by historical, aesthetic, scientific, educational, and practical significance. The forests and their foresters are being asked to take on a newly urgent set of tasks in a world where forest depletion has reached alarming proportions. Man is connected to his earthly habitat by the trees and vegetation around him; they are an essential part of biological life. Without trees we should be worst than diminished: we would be part of a planet in terminal decline.

2. FOREST PHILOSOPHY

2.1 INTRODUCTION

THEMES: NSW HO 9 Environment

AHC HT.01 Tracing the evolution of a continent's special environments

> 'In the woods, too, a man casts off his years as a snake its slough, and what period soever of life, is always a child.'

The American philosopher Ralph Waldo Emerson wrote these words in his 'Essay on Nature' in 1836. They were to influence generations of Americans seeking an experience of sublimity drawn from nature and its marvellous works. His words were quoted in Northern NSW when a rainforest reserve of 12000 acres on the Nightcap Range was dedicated as a National Forest in 1935. The local people, however, thought that the dedication was only hollow words when parts of the area were later given over to banana plantation (Proudfoot 1984:55).

This sentiment is akin to that which Les Murray, Australian writer and poet, sees in a 'working forest'.

> 'It is a quality...rather sober, subtle, and uncorrupt, with a curious remote decency about it. As you move and work there, or as you die there, you do so in an intense spare abundance which sheds its perfume and its high riddled light on you equally' (Murray 1997:73).

The great botanist Federick Von Mueller, in Australia, was also moved by the great forests of Victoria: 'What is vitality,' he wrote, 'and what mortal can measure the share of delight enjoyed by any organism?' At another time he said of forest culture:

> 'I regard the forest as an heritage given to us by nature, not for spoil or to devastate, but to be wisely used, reverently honoured, and carefully maintained. I regard the forest as a gift, entrusted to any of us only for transient care during a short space of time, to be surrendered to posterity again as an unimpaired property, with increased riches and augmented blessings, to pass as a sacred patrimony from generation to generation' (Mueller 1876, quoted in Powell 1976:71).

Mueller was educated in Germany, and drew his philosophy from the German foresters, who equated their forests to a grand national patrimony (Schama 1996:115-118). He saw them as something to be cherished, but also as a resource to be used wisely for the national benefit.

An underlying concern has been apparent in botanical circles in Australia since the middle of the 19th century, and has always been central to the conservation movement here. In NSW, the Reverend William Woolls was an early spokesman and encourager of the study of forests. It became both a scientific stimulus to botanical endeavour and theory, and a genteel fashion, with ladies joining in the collecting of specimens and painting their native flowers. Australia quickly became an important field for botanical science.

The fledging scientific societies, under the patronage of von Mueller in Melbourne and the Rev W.B. Clarke in Sydney, noted the changes that had taken place around the cities in the plant material since white settlement. There were worries that the destruction of the forests further afield would result in drastic climatic changes. There was considerable debate in scientific circles in the 1870s and 1880s.

The forests even then inspired a sense of wonder in the articulate beholder. Agnes Fagan, writing in her diary in 1885, said of Hogan's Brush near Gosford at the head of Narara Creek, 'Immense trees seemed to form a canopy over us, to look up one was amazed at the heights' ...and was glad that the Government had formed a Nursery reserve there, for she presumed that it would be all destroyed (Tabuteau 1991:24). There was a sense of inevitability about the ringbarked trees, the tall saplings dying, the trees felled and stacked.

Dorothea McKellar wrote in her poem, 'My Country',

> 'The stark white ring-barked forests,
> All tragic to the moon,'

as if they were an integral part of the landscape, and they were, in the years before and between the wars.

They were even painted by amateur artists.

2.2 EXPLORERS AND ARTISTS

Australian explorers, John Oxley, Clement Hodgkinson and Allan Cunningham, recorded their astonishment at 'the dense walls of shining brush, the monumental trees, flowering creepers, the vast variety of plant material'. They recorded their sense of wonderment and awe. Von Mueller put it forcefully: 'No city, however great its splendour, brilliant its arts, or enchanting its pleasures - can arouse those sentiments of veneration which, among all the grand works of nature, an undisturbed forest-region is most apt to call forth' (Mueller 1876, quoted in Powell 1976:71).

The artists tried to grapple with the aesthetics of the forest scenery. Another German, schooled in Italy and Dusseldorf, Eugen von Guerard, the head of the Victorian School of Art, is justly famous for his pictures of the forests near Melbourne, and of the Illawarra near Sydney. Conrad Martens, too, painted forest scenery, delighting in the vegetation which contrasted so strongly with the usual eucalyptus ecology, for example his 'Brush scene at Brisbane Water' (Figure 1). W.C. Piguenit painted many forest scenes, a notable one being of 'A Northern River, NSW' c.1900, which recaptures some of the vanished forest denseness of the brushes along the rivers there (Figure 2).

Photographers too, produced many views: N.J. Caire, Charles Kerry and J.W. Lindt, among them. Lindt worked for a while from his studio based at Grafton. He specialised in images depicting Aborigines in their traditional state.

One of the most telling images of the Richmond River, however, is found in a surveyor's map of the site of the town of Lismore, 1855. Drawn by Fredt S. Peppercorne, it shows the river winding between its banks which are set in a forest of trees, itself winding with the river, thickening up around the junction of the Richmond with its tributary, Leycester's Creek. This shows the extent of the virgin rainforest then, and also shows its vulnerability. How quickly it was cut out! The town, surveyed and settled, had 'thinly timbered flats' surrounding it adjacent to the thin strips of river forest (see Figure 8).

* * * *

There is some difficulty in organising an historical account of the development of the Upper and Lower North East Regions, based on a thematic framework. The dominant themes are very similar in each district, the sequential progression of each land use is also similar. There is no major, dominant centre; the towns which became the district centres for their districts are based on the rivers, and compete with each other, and with the smaller towns which were more firmly established when harbour and river public works were carried out at the beginning of the 20th century.

The State Forest organisation, which gradually took such a big role in these districts with its control of a large portion of the land, forested, or cut-out and re-afforested, has not been easy to survey. Its role is pervasive, but it is not easy to make generalisations.

2.3 FOREST PHILOSOPHY

Throughout the centuries there has been a continuing dialogue about forests and trees - their symbolic meaning as well as their practical uses in the economic life of a people. The Ancients revered trees as sacred plants, symbolising certain gods, and gave them a place in their religious ceremonies. In ancient Britain too, the Druids marked them for special worship, and some trees achieved legendary status - The Sacred Whiteleaved Oak of the three choirs, the sacred flowering Thorn Tree, Merlin's Oak at Carmarthen, Selly Oak at Birmingham, Goff's Oak, Herts, Bracon Ash at Suffolk, the great Yew at Dundon, Gog and Magog, the Oaks at Avalon, to name some of them. Woods and forests too became sacred or haunted places, like Grovely Wood near Glastonbury, both feared and revered (Michell 1988:138, 142).

Other cultures too, revered trees, like the Yggdrasil of the Norse mythology, a gigantic ash tree, with its roots in the nether world and the mystical spring at its base. Trees especially, as living things, 'stand over and against human generations in a way which demands acknowledgment' (Davies1988:41).

In Australia, the forests at the end of the 18th century were so dense and pervading, that the settlers thought they were interminable, and had no sense of their boundaries. They were perceived as 'wilderness', a 'howling wilderness' as Governor Gipps put it, and the

task of the settlers was to subdue it and make the earth 'fruitful' by clearing and cutting out the forests, and planting grain, vines, and fruit trees, life-sustaining plants which they brought with them from Europe.

Major Mitchell, the great surveyor of the early colonial period was at first scornful of the forests around Sydney. 'These vile woods', he called them in a poem expressing his homesickness for cultivated England. At the same time, he gradually became enchanted with the depth and variety of the great forests, and was avid to explore them (see his lithographs).

It has been pointed out by several writers in the past few years, that 'Trees and woodland have provided as rich a symbolic resource as a material one, frequently being exploited to represent ideas of social order' (Daniels 1988:43-57). And so it turned out in Australian history. The conventional wisdom of the first settlement era was to cut down the trees to make way for farmland; it became in fact, an imperative through the land regulations. Now, in the third century after European settlement, there is a reversal of this idea, and the ideal is seen to lock away some of the forests, and not allow any timber getting in the National Parks at all.

The State Forests, designated forested areas, are however state controlled to allow some harvesting of wood, and they are still seen in part as 'working forests', somewhere in between the National Parks and private land. But they now have attached to them another, higher dimension. They also are idealised by some as semi-sacred places, and a strong, emotional body of opinion is ready to decry any effort to utilise the wood they produce.

The 'political iconography' of forests has been a feature of Australian politics in the seventies and eighties, now enshrined in legislation in the nineties. The trees have become a part of our social and political history. They represent a sense of continuity and social cohesion in Australian as well as European history.

2.4 BLACK FRIDAY 1939 VICTORIA AND BLACK SUNDAY 1939 NSW

For a comparison with a forest region which may be able to cast some light on the forestry practices on the North Coast, it is possible to go to the great Victorian forests. The progress of Victorian foresters along the path of reform has been accelerated by a disaster of such proportions that they were forced to change direction and stop taking the forests for granted.

In 1939, a drought year, a wild-fire of such proportions swept over central Victoria burning 1.4 million ha of forest land; 2428 houses were destroyed, 1500 people made homeless, 71 lives were lost, whole communities wiped out. It covered an area of about one fifth of the state (Griffiths 1992:3-13). The scope of the disaster is hard to comprehend. No fire in NSW can compare with it, though fires here too, are part of the summer scene. In NSW, on Black Sunday of the same fateful year, 1939, terrifying fires swept through the Buladelah and Wang Wauk forests of the lower north coast (Murray 1997:62).

This Victorian disaster was a fire that changed the psyche of the Australian people, entered their folklore, and sent shock-waves north to NSW. What is more, it is still within living memory. The fire marked a turning point in Australian forestry. The post-war preoccupation with planting and encouraging new forests to grow was all pervading. The Australian forest legacy could no longer be taken for granted. This preoccupation also became important in NSW.

The Mountain Ash Forest is growing back now, after experimental beginnings by Forester David Ashton who followed a vital clue for its regeneration (Griffiths1992:61). His work, unfortunately, has no parallel in NSW for the growing of Cedar. Ashton was a fine botanist, but he was also a careful historian, like every good ecologist. He tapped the historical record as well as the botanical history.

The study of the Victorian forests has also pointed to some relics which might be found in NSW forests on the North Coast, the escarpment, and the Tablelands. 'In a land of fire custodians of culture came to rely heavily on memories, relics, and an ability to read the forest itself' (Griffiths1992:85). Where there are few memorials to help call up the past, folk memories are precious. The entwining of culture with nature helps to explain the natural processes in the forest, especially where the former custodians have drifted away. The forest itself reclaims the relics, so traces of human occupance assume an urgency before they are lost, and the story of their purpose and endeavour fades.

2.5 HISTORIC SITES IN FORESTS

Historic sites in the forest are rarely grand or beautiful. They may be rubbish dumps, or a heap of sawdust to

mark the site of a timber mill, a signpost to the area's industrial past. Aerial photography can provide a clue of their past locations. Tree stumps can take on the aura of historic monuments. It is said that the Giant Fig in Victoria Park Nature Reserve (Heritage Item ID 3911865, Appendix 2) was seen by Cook and Banks as they sailed up the coast in 1770, and noted in their log books. Tree stumps can be most evocative; even now there must be some stumps and ringbarked trees solemnly marking places in the Big Scrub area.

Sometimes ancient and venerable trees remain, some isolated specimens, but not especially remarked upon. They should be. They should be marked and checked from time to time, in the forest, or elsewhere, even if felled or buried, or where the forest has been cleared. A grove of ancient trees where they still exist should be treasured. Some remnants of the Big Scrub rainforest have been preserved in northern NSW (Heritage Item Ids 3911865, 3911867, Appendix 2). A number of venerable trees have been preserved and pointed out to the public by State Forests (Heritage Item Ids 3911781, 3913201, 3913202, 3913596, Appendix 2).

Remains of timber tramways often have big timber in their construction, and earthworks. Six inch nails, dogspikes in Victoria, are found almost everywhere, bogie-wheels may be found along tramways, some bridges, collapsed or unsteady, such as that in the Wang Wauk State Forest (Heritage Item ID 3913122, Appendix 3), are found in National Parks and State Forests, especially near old mining areas. A wide range of artefacts may still be found near mills or mines: stamp batteries, flywheels, wheel hubs, sawblades, cyclones, fire dugouts, cement kilns, firebricks, corrugated iron leantos, chimneys. Sometimes whole huts have survived, with remnant exotic gardens still with hardy specimens growing. Bottles and tins are found in old rubbish dumps.

One of the greatest disturbances in many northern region forests has been mining - for gold, tin, antimony, semi-precious stones. Low key mining has penetrated a large number of reserved forests. At others, like Dalmorton State Forest, its presence is found in relics around the mining fields. The forest might claim back the sites, or the mines might be re-worked again. Historic records are essential to the prospector to enable him to see where the past strikes have been. The researcher can likewise use the old mine records for information.

* * * *

'It has been remarked that History has been slow to find its way into land management considerations. History can have a fundamental role where 'nature' and 'culture' are intertwined. Trees live longer than their managers, and natural or imposed forest cycles are greater than a lifetime' (Griffiths 1992:85) . In the past secrecy has been the refuge of the foresters in their defence against outsiders like environmentalists on the one hand, and those who would over-utilise the forests on the other.

The debate between nature and culture has been furthered by the papers attracted by the Australian Forest History Society since 1988. At three ground breaking conferences, the last in 1997, the history and philosophy of forest managers and the forests they guard has been scrutinised. Comparisons have been made, both in time and place. Practices in Europe and America have been used to inform our local efforts, old forests and new ones are evaluated. In Forestry, local history can come into its own, but at the same time it can be linked with larger questions: questions of communities, of interrelationships. The *Ever-changing Forest* is a good title for their journal. The picture is never static, decline can be succeeded by regeneration, the trees grow and life goes on.

3. LANDSCAPE

THEMES: NSW HO 9 Environment

3.1 INTRODUCTION

The brief for this project is to describe the cultural history of the forested landscape within the UNE/LNE CRA regions. The area encompassed by this history extends from the Hawkesbury River to the Tweed River, including the New England plateau and the remote ranges of the Wollemi in the south-west.

The term 'forest' itself carries cultural connotations. Its use in the 19th century to describe the New South Wales landscape, by people mostly originating from Britain, can be confusing. The surveyor Henry Dangar, when in the Hunter Valley, used the term to describe an area as lightly timbered or even without timber (Field Book 236 18/6/1825). Its significance apparently derives from the English concept of 'unenclosed woodland' [as opposed to a park], its emphasis deriving from the Latin origin - foris - meaning "outside" (Concise Oxford Dictionary). In England, from mediaeval times until the nineteenth century, the term referred to the area between the wall of the town or village and the wood. Thus the 'forest' was a clear, grassy area with a few large trees at wide intervals. Prospective invaders had to leave the protective cover of the wood and cross open space before they might scale the wall (Mabey 1995). Under this interpretation much of the continent of Australia, being hitherto unsurveyed and unfenced, would have been forest land. Breton (1833:58) defined his use of the term 'open forest' as 'of that description where there is no underwood, and the trees in general far asunder'. This is essentially the same as the definition given by Atkinson (1826):

> Forest lands are variously designated according to the quality of the soil, or the nature and number of trees growing thereon, such as good, poor, open or thick forest. It is, however, always to be understood that forest means land more or less furnished with timber trees, and invariably covered with grass underneath and destitute of underwood.

This concurs with Sir Thomas Mitchell's statement that 'a 'forest' means, in New South Wales, an open wood with grass' (Mitchell 1839; all above quoted in Kempen 1997:20-21).

A 'brush', by contrast, means rainforest, the opposite of the American meaning of low scrubby growth:

> People speak of standing brush, green brush and black brush, depending on the degree to which an unbroken upper canopy cuts the sunlight and produces a moist, still, itching twilight below, home to leeches, stinging trees, catbirds and cunjevoi lilies (Murray 1997:58).

The *Macquarie Dictionary* (1981) definition of forest is - 'a large tract of land covered with trees [as in Kioloa State Forest], or the trees alone', or British meanings '1 a tract of woody grounds and pastures, generally belonging to a sovereign, set apart for game, 2 an area once extensively wooded now more or less cultivated'.

The *Macquarie Dictionary* definition of a large tract of land covered with trees is that implicit in the brief for this project. At the time Europeans arrived almost all of the two CRA regions would have consisted of forest in this sense. Exceptions would have been the areas of grassland on the New England Tableland, grassed swampy areas on the lower reaches of the Clarence River, for example, and mobile coastal sand dunes. Now, particularly along alluvial river flats and rich basalt soil plains, there are many areas which fit the second British definition, that is, 'once extensively wooded now more or less cultivated'. Within the two CRA regions, however, there are very extensive tracts of land still covered with trees, and it is these areas which provide the focus for this study, and the cultural processes which shaped them.

3.2 THE BROAD PICTURE

The north-eastern sector of NSW has three great, broad, distinctive landscapes. Firstly, there is the coastal plain behind the superb fringe of sparkling beaches, where the rivers which rise in the Great Dividing Range building up at the western horizon, weave their slow, stately way through the forests and cultivated land of the plains to

the sea. Their exit is not without difficulty, for they are barred by sifting sand-bars at their mouths.

Secondly, there are the great escarpments running along the eastern edge of the tablelands, clothed with great semi-tropical forests, making a series of dramatic statements, as if closely guarding their secrets. Their cliffs plunge downward, their waterfalls can be spectacular, their grandeur impressive. Linked to this Great Divide, the MacPherson Range hard up against the border of Queensland, has some majestic peaks, Mount Lindsey and Mount Warning, clues to the caldera volcanoes which drew together the mountain chains and erupted, spreading igneous rock and granite formation like a fiery cloak over the prehistoric landscape.

Thirdly, there are the Tablelands, a high continuous plateau of almost level land, varied with gentle hills and dales, the backbone of the north, where the streams which flow to the west of the state to join the Darling River have their genesis. The western slopes are more gradual than the eastern escarpments, which form a distinctive barrier still, where only a few roads have been hewn out of the cliffs, and trade and contact between the three landscapes has always been difficult.

Standing at Point Lookout, 60 kilometres west from Armidale on the top of the escarpment, one surveys **a** magnificent view across two great valleys, the Macleay to the south and the Bellinger to the north-east. When the storms in summer come racing along these valleys with the heavy black clouds almost touching the mountains, the effect is sublime indeed. A soaring eagle heralds the driving rain and the light breaks through on the far horizon. The mountains, the mighty escarpment, the sea glittering in the distance, combine to make a landscape of singular power and beauty.

The south eastern sector of the UNE/LNE region is dominated by the Barrington Tops area of the Mount Royal Range. From one of the higher points, the basalt cliff at Careys Peak, overlooking an awesome valley, it is possible, on a clear day, to see the Stockton sand dunes on the coast north of Newcastle. The scenery has been described by Miles Dunphy:

> All around the big salient of the high country, between the radiating ridges and in the deep gorge-heads, there was a wonderful spread of rain forest growth that crowded the fast-flowing streams descending over waterfalls and rapids down to wider valleys flanked by farmland and grazing land; beyond which, the ends of roads pushed up into the jungled gorges and the eucalyptus-clad more open ridges that rose like big buttresses to sustain the Tops plateau, somewhat mysterious, lost in clouds (Prineas and Gold1983:196).

From this rarefied and dramatic landscape the Hunter River rises to flow towards the south west until joined by the Goulburn and then to the south east, to Kooragang Island and the ocean. At first narrow and steep sided, the valley gradually opens out, and the river, meandering across the valley floor, has left swamps and discarded channels to either side of its present course.

To the south the Hawkesbury gathers its waters from a large catchment area extending to the south-west of the County of Cumberland. Its tributaries, the Nepean, the Warragamba and the Grose combine to flow northwards at the foot of the rugged Blue Mountains. It is joined by the Colo and the Macdonald from the north as it approaches the turn into Broken Bay at Wisemans Ferry and begins to flow towards the sea. The hills start to rise higher until the river is squeezed between high sandstone ramparts before it turns out into the large drowned river valley. Mountain after mountain rises in the distance, crowding the horizon and forming the barrier that hemmed Sydney in for fifty years. Three great heavily timbered National Parks, the Blue Mountains, the Wollemi, and the Dharug, surround it to the north-west, reaching to the valley of the Hunter.

3.3 CENTRAL COAST

The Hawkesbury River forms the southern boundary of the study area on the coast. Inland the boundary skirts the eastern edge of the Blue Mountains, the Bulga Mountains are located to the west and the Watagan Mountains to the east, draining into the coastal lake system of Brisbane Water, Tuggerah Lakes and north to Lake Macquarie. The mountains form the headwaters of streams such as the Macdonald River and Mangrove Creek, which drain into the Hawkesbury River, the Wyong River and Dora Creek which drain east into the Lakes, and Wollombi Brook and Wallis Creek which drain north into the Hunter River. Apart from limited alluvial deposits fringing lakes and waterways, bedrock is Hawkesbury sandstone, fringed to the west and north by underlying Narrabeen sandstone. Parts of the rugged landforms have had timber extracted but are generally otherwise undeveloped and forested. Mount Yengo National Park and part of the Wollemi National Park cover the western half of this area, while State Forests cover a third of the remainder.

Settlement has occurred in varying degrees along the inland streams and around the lakes, and is increasingly intensive in the coastal area around Gosford and Wyong. Conrad Marten's picture 'Brush Scene, Brisbane Water' (1848, Figure 1) illustrates what Agnes Fagan described in her diary on visiting Hogans Brush, beyond the head of Narara Creek. There in 1885 immense trees formed a canopy overhead and 'to look up was to be amazed at the heights' (Tabuteau 1991:24). She also

remarked upon huge tree ferns, staghorns and vines along the creeks. However, at the head of Narara Creek was a sawmill, and there were stumps all over the roads. On the road to Ourimbah immense trees had been felled and quantities of wood cut and stacked for use on the new railway building being constructed. Many tall saplings were dying from ringbarking by settlers. Agnes Fagan was pleased to learn that Hogans Brush was reserved by the government for a forest nursery. The heritage of early plantings in this area is encapsulated in what is now Strickland State Forest (Heritage Item ID 3913033, Appendix 3).

3.4 LOWER HUNTER

To the south of this area is the rugged sandstone plateau with streams flowing northward to the Hunter. Wollombi Brook is the largest of these streams, rising from its catchment near Mount Yengo. Towards the east the plateau gives way to the hilly Lake Macquarie area, much of which is still forested, but with level land developed for agriculture and a fringe of urban subdivisions extending around the lake foreshores. There is low swampy ground around Dora Creek, Cockle Creek and Wyee Creek and in the Redhead-Swansea area, where there are large areas of poorly drained tidal flats carrying mangroves.

To the north lies the lower Hunter Plain, dominated by the extensive alluvial flats of the lower Hunter, Williams and Paterson Rivers. Attractive to early settlement, these areas were soon cleared, leaving treeless expanses. Tall cedar trees once graced Patersons and Wallis Plains in the Maitland-Morpeth area where there were also lagoons, silted flood channels and open swamps. The vine brushes along the banks of the river were up to 2-3 miles deep in places. The Quaker missionary James Backhouse (1843:388, 397)

> took a walk into one of the luxuriant woods, on the side of the Hunter, such as are termed Cedar Brushes, on account of the colonial White Cedar, Melia Azedarach, being one of the trees that compose them. Eugenia myrtifolia and Ficus Muntia are among the variety of trees in these brushes...These Cedar Brushes are also thick with climbers, such as Cissus antarctica, the Kangaroo Vine, Eupomatia laurinae, a briary bush, allied to the custard-apple but with an inferior fruit, and several Apocineae.

This scrub, sometimes so thick it was difficult to penetrate even a few yards (Breton 1833:122), extended to the water's edge. Many of the trees were gigantic, and lichens, staghorns, elkhorns and mistletoe flourished.

Land between the rivers is now mostly developed farmland for dairying and beef cattle. The mouth of the Hunter requires constant dredging, but the port can accommodate very large bulk carriers.

An extensive dune barrier marks the sea coast from Newcastle to Port Stephens which is a natural harbour. The Australian Agricultural Company was established at Carrington on the northern side of Port Stephens in 1826, but that area has long been deserted. On the southern shore recreational and retirement development is presently increasing rapidly. Elsewhere its hinterland remains forested. There is much swampy land around Port Stephens.

The centre of the region is developed on Upper (mined early) and Lower (mined from 1900) Coal measures which provide the mining and industrial character of the region.

3.5 UPPER HUNTER

This region comprises the area draining to the Hunter, via the Hunter itself, the Goulburn River and Dart Brook. It is bounded on all sides by steep rugged country, except in the far west where there is access to the interior. Southward is dissected plateau country, to the north and west is the Liverpool Range, where there are small remnant Cedar Brushes. To the east is the Barrington Uplands, the focus of the Barrington Tops National Park, fringed by State Forests. Particularly to the north of the upper reaches of the Hunter River, are extensive tracts of rugged country in private hands which has been used for grazing stock, but remains forested.

The Hunter Valley plain lies at the centre of the region, from Singleton to Scone and Murrurundi, a broad belt of lowlands 15 kilometres wide containing much alluvial land. This mainly consists of open undulating grassland and level alluvial plain, which also occurs along the Williams River. In contrast to the tangled vine brushes which fringed the lower Hunter, north from Maitland, the landscape was less densely wooded.

John Howe first sighted the upper Hunter River in November 1819, when he reached the southern bank opposite the present Arrowfield vineyard. Riding south from there towards Jerrys Plains he wrote

> Back ground very fine and little timber, only a few trees to an acre, and some patches without. Opposite side of the river, and more level and what timber is on, is of no object. It may be said to be clear. The high land appears to be about 3/4 of a mile back, and that has very little timber on it, and the grass very green (in Campbell 1928:240).

Upon his return to Windsor Howe (1819) reported to Governor Macquarie

> The land is very fine forest ground, thinly timbered, I think not exceeding from 4 to 6 trees to an acre,...in many places there is from 20 to 50 acres with not more than from 20 to 30 trees on it. The flooded land continues from about 3/4 to 1 1/2 miles back from the river on each side (and more by places) and great parts of it equal meddow Land in England.

In March 1820 Howe returned and followed the river down from where he had left it to Wallis Plains. Of this stretch he wrote (CSIL 4/1744:162-3, 21/3/1820) 'except a few places there is more timber than on the part that I made in November last, tho much thinner than on the banks of the Hawkesbury'.

Thus below Singleton and Patricks Plains the landscape became gradually more densely wooded, eventually succumbing to the vine forests of Wallis Plains. Higher in the valley, however, the parkland continued. Peter Cunningham, in the Upper Hunter and Goulburn River valleys during 1826, wrote

> In all these luxuriant plains there is scarcely a superfluous tree to be seen, not ten above a dozen to the acre; and patches of acres are here and there met with destitute of even one, and only requiring the instrumentality of the plough to produce an abundant crop (1827:156).

Formerly entirely rural by contrast with the Lower Hunter, open cut coal mining has recently developed in the Upper Hunter on a large scale, affecting the towns of Singleton, Muswellbrook, Aberdeen and immanently Scone. Other significant industries characterising the area are thoroughbred horse breeding, and the wine industry. French and Spanish grape varieties were planted by James Busby at Kirkton on the Hunter in 1824, and George Wyndham established a vineyard at Dalwood near Branxton in 1828 (Evans 1984:12).

To the west, beyond the LNE CRA region, is the Merriwa plateau, composed chiefly of rolling fertile basalt country, served by Cassilis and Merriwa. Streams mostly flow south from the Liverpool Plains to the Goulburn River incised in the sandstone to the south.

To the north is the Nundle area on the Great Divide, encompassing part of the upper catchment of the Darling River. This area, which experienced the discovery of gold in the 1850s, is relatively little developed, being rugged and mostly forested, and includes State Forest land.

3.6 NEW ENGLAND

The New England Region is largely made up of a plateau bounded on the east by very rugged country. On the west steep country, it falls into the valleys of the Macintyre, Gwydir and Namoi Rivers, and to the north the divide is less marked. The rivers have their headwaters on the plateau and those flowing east, including the Richmond, Clarence and Macleay, plunge over the sheer gorges of the eastern edge of the plateau producing some spectacular falls, for example Wollomombi, Dangar, Ebor, Mihi and Chandler.

The plateau is generally a rolling thinly-forested surface averaging about 900 metres above sea level with occasional peaks over 1500 metres. There are extensive flat areas such as Beardy Plains. It is a naturally open forest with grasslands which have been much extended by clearing. When John Oxley passed from the Liverpool Plains onto the granite of the tableland in 1818 he noted how the grey box gave way to ribbon gum, expressing his pleasure at the aspect of the landscape 'perfectly open though much covered with fallen timber' and the 'finest open country, or rather park, imaginable' (Walker 1966:9). In 1827 Alan Cunningham passed though a small part of New England at its north west corner, noting 'open forest land, furnishing good grass and large timber' at the Severn River (Walker 1966:10).

The area presented an attractive grazing resource to early settlers. Rainforest and wet sclerophyll forests occur on the surrounding steep country and provide a basis for timber industries.

3.7 MANNING RIVER

This region is bounded on the south by the inlet of Port Stephens, to the north of which is a dune barrier enclosing the Myall Lakes subregion. The coast is mostly sandy, of limited dairying, grazing and timber development. Two important seaside resorts have developed from mere fishing settlements at Forster and Tuncurry in the post-1945 era. To the west the Gloucester River drains a long broad valley running from north to south. The bar-bound Manning River drainage, with alluvia to the east, forms a major part of the region. Rising to steep country and the Barrington Tops National Park, the land is used for cattle grazing and for timber-getting. To the north lie the Comboyne and Bulga plateaux. Reached by steep roads, both densely populated by dairy farmers in the early 20th century, they are now given over to beef cattle grazing where once luxurious rainforest stood on basalt flows. Both were served by the growth of the town of Wingham, which was once called Cedar Party (Ramsland 1987:29).

From Mount Seaview on the edge of the escarpment John Oxley and his companions had looked over to the Manning River in the distant south-east, where the

country was 'mountainous and broken' to a degree they had not previously seen (Ramsland 1987:4). They proceeded south over the mouth of the Manning and Farquar's Inlet at Old Bar, and then turned inland through 'fine rising forest country', and in the vicinity of Wallis Lake, named after the commandant of the penal settlement at Newcastle, the shores were flat with thick brushes and steep freshwater swamps. Wallis Lake, 'studded with numerous islands of forest lands…was extremely picturesque and beautiful'. Convicts who were later recaptured after escaping from the penal settlement at Port Macquarie reported that the countryside in the vicinity of the Manning was 'thinly timbered, interspersed with open downs and watered with running streams and highly fertile' (Ramsland 1987:9, from Birrell 1970:58).

3.8 NORTH COAST

This strip of land extending north to the Queensland border is bounded on the west by high scarps leading up to the New England plateau, to which there are few passes. The region is not strictly a coastal plain, consisting rather of a series of river valleys separated by ranges. From the south the major rivers are the Hastings, Macleay, Nambucca, Bellinger, Clarence, Richmond and Tweed. Coasts typically alternate headlands and coastal barriers, with bar-bound river mouths dangerous to large vessels.

All except the Nambucca and the Bellinger provide extensive alluvial flats, liable to flooding, but intensively developed for agriculture. Rainforest once covered the levee banks of the lower rivers, and is present in the steep valleys to the west. On the longer rivers are large areas of forest grazing country early occupied by pastoralists. Extensive forested areas occur close to the coast on the ranges and on the rugged scarp hinterland. Between the Bellinger and the Nymboida, part of the Clarence catchment, the scarp below the Dorrigo plateau extends to within 20 kilometres of the coast. In these areas which have long been abundant sources of cedar and other timbers, forestry continues to be a strong focus.

Oxley's party descended down the steep slopes from Mount Seaview and the country gradually opened up as they proceeded towards the sea near the Hastings. The country they passed through was open forest of blue gum, stringy bark and ironbark with occasional small flats on the river, abundantly covered with good grass. In the valley of the Hastings River, which Oxley named after the current Governor-General of India, the country was broken into 'considerable forest hills and pleasing valleys' (Ramsland 1987:4-7). Near the coast his party found heavily timbered country 'studded with brushes', dense thickets of cabbage palms and myrtle trees, and tree ferns 20 feet high, all of which they found very different form the 'stunted banksias' on the Sydney sandstone. Inside the rainforest there was absolute midday darkness. The banks of the Hastings were thickly wooded with rainforest - creepers, figs, rosewood and cedar (McLachlan 1988:27, 41).

Rainforest also grew along the rivers to the north, and the creeks which flowed into them, the Bellinger, the Macleay, the Brunswick and the Clarence, first known as the Big River (Keats 1988:95). North of the Richmond, however, was an enormous subtropical rainforest of some 1600 square kilometres, growing on a basalt flow cupped within the curve of the river (Vader 1987:77). An oval area, separated from the coast by swampland in some places, reaching the cliffs in some places, and bound by eucalypt covered hills to the north and west, it extended north to the Tweed and west to Casino (Keats 1988:442, 446). This huge, tall and dense rainforest, over which the red cedars towered by two to three metres, was known to the early cedar getters and pastoralists as the Big Scrub. Opposite Pelican Creek, where the first cedar camp was established in 1842, there was a belt of cedar along the river nearly a kilometre wide. At first seeming to offer unlimited stands of cedar and other softwoods, the Big Scrub was almost completely cleared in the 1880s (Curby 1997:91). Some remnant areas of the Big Scrub have been preserved as Nature Reserves (eg Heritage Item IDs 3911865 and 3911867, Appendix 2).

4. CONVICTS

THEMES: NSW HO 2 Convict

AHC HT.07 Governing

HT.07.05.06.02 Using Convict Labour

4.1 INTRODUCTION

There were three convict settlements, all in the Lower North East Region. The first was in Sydney, the second and third moving ever north far from the main settlements. At Sydney Cove, Parramatta, and in the Hawkesbury/Nepean area gangs of convict men moved into the surrounding bush cutting timber to clear land and build houses, furniture, fences and bridges, and using it for fuel for heating and cooking. Large sheets of bark were taken from trees for roofing and walls. The first cedar was taken from the Hawkesbury district.

From the beginning of white settlement the forests were a resource for building materials and fuel.

In 1801 the mouth of the Hunter River was explored by Paterson and Grant who reported on coal seams and large stands of cedar. A convict settlement of secondary punishment was established at Newcastle, and gangs of men were sent out along the river and creeks to cut stands of cedar for use in Newcastle and shipment to Sydney.

By 1803 in the first issues of the *Sydney Gazette* newspaper, businessmen such as Simeon Lord and others advertised lengths of cedar for sale and for sawyers to cut cedar. At this time the timber was fashioned into logs by hand in sawpits. As settlement spread north, and Sydney became too close a destination for convicts escaping from Newcastle, a new convict station was established at Port Macquarie.

Port Macquarie was discovered by John Oxley in 1818 when exploring a route from Wellington in the interior to the coast. Here too cedar was abundant along the Hastings River and its tributaries, and gangs of men were sent out to harvest it. At this time the cedar logs were floated down the rivers to outposts where they were loaded onto ships and sent to Sydney.

Darling Harbour early became the centre of the colonial timber trade. Here ships could dock at the many timber mills established on the shore and transfer their cargoes direct for milling. The milling was initially done in sawpits, but in 1812 the first steam-powered mill was established by John Dickson. Steam mills were introduced gradually, and at the other mills and smaller operations the logs were still cut by hand in sawpits.

Convicts at these three settlements through timber-getting cleared thousands of acres of land for the settlers. Most of the sawyers on the Macleay, Nambucca, and Bellinger rivers, many of whom stayed in the area and became settlers, were, or had been convicts.

4.2 SYDNEY CONVICT SETTLEMENT

In Sydney from the beginning of settlement in 1788 gangs of male convicts worked at timber getting (McMartin 1983:97). There were no bullocks or other beasts of burden in early Sydney, and gangs of convicts were used for the tasks in the forests later carried out by bullock teams. The old ex convict Joseph Smith of St. Albans arrived on the Second Fleet in 1790 aged 14 years. In his 'Voluntary Letter from an Old Settler' written to a newspaper in 1845 he told how ‘Many a time have I been yoked like a bullock with twenty or thirty others to drag along timber...We used to be taken in large parties to raise (lift up) a tree’ (Hutton Neve 1982:33).

4.3 NEWCASTLE CONVICT ESTABLISHMENT

In 1804 Lieut Charles Menzies, some military and 34 convicts were sent to Newcastle. This was to punish and remove those convicts involved in the Irish insurrection at Castle Hill in March 1804. The convicts were employed in getting timber around the settlement for huts and firewood. There was also already a ready market in Sydney for the cedar at the mouth of the Hunter River. Later the settlement was enlarged and the cedar getters ranged further inland along the Hunter.

Maitland, known as 'The Camp', was a headquarters for the sawyers and a place called 'The Cedar Ground' was at the bottom end of Bolwarra. In July 1818 Governor Macquarie made a tour of inspection. The official party found an overseer, a gang of 15 men and 4 soldiers. The Governor reported in his journal that they had a considerable amount of cedar logs cut and he walked a mile into the woods inspecting the standing cedar (Maitland and District Historical Society 1983:10).

4.4 PORT MACQUARIE CONVICT ESTABLISHMENT

In 1818 Port Macquarie was discovered by John Oxley after following the Macquarie River, crossing the Liverpool Plains and then travelling eastwards over the Dividing Range near Walcha. He noted the dense thickets of cabbage palms and myrtle trees and luxuriant forests of brush. He also described the immensely thick canopy, making it absolute midday darkness in the rainforest (McLachlan 1988:27). The convict settlement was established here as it was at that time thought to be too remote from Sydney for escaping convicts. Governor Macquarie was also interested in the availability of good timber. In 1819 he wrote to Lord Bathurst that it was a most useful area because of the timber. 'This is a most important consideration, the supplies from Newcastle having become very difficult to procure owing to the forests there being nearly exhausted' (McLachlan 1988:43).

Here, as around Sydney and Newcastle, convict gangs cut cedar, and convict transports bringing supplies to the remote settlement returned to Sydney laden with cedar.

Remains of the road built by Port Macquarie convicts and completed in 1842 connecting Port Macquarie with Walcha in New England to the west, have been recorded by SFNSW (Forestry Commission of NSW 1995:16-5). The road passed through Doyles River State Forest and parts of it are still trafficable. It was replaced by the Oxley Highway in 1932. Sections of the stone embankment of the old road are visible along its route. The Forestry Commission has applied a Preferred Management Priority 1.1.8 (Historical) Classification to a strip of forest on each side of the road to protect it. Some of the camps used by the convicts during construction of the road have been located at Lower Sheepstation Creek and Gingers Creek on either side of the Wingham Management Area and at Top Sheepstation. These are outside the WMA State Forests. Lyall Cooper a local resident found the site of the convict camp in the vicinity of Lower Sheepstation Creek where he identified fireplaces, pottery, and a dam (Extract from *Wingham Management Area EIS*, August 1992 in Houghton 1997:90-91).

Not only the old road but also lime kilns built by the convicts in about 1834 for making lime for use in buildings in the Port Macquarie settlement have been found in the forests near Port Macquarie (Heritage Item ID 3904234, Appendix 3). The Pipers Creek Lime Kilns, located in Compartment 1, Maria River SF, have been recorded by the National Trust and also have recently had a Plan of Management produced for them (Extract from *Kempsey Management Plan* 1988:1.6.7 in Houghton 1992 File No.2).

4.5 TWEED RIVER GUARD POST

On the Tweed River in 1828 a guard post was established on the southern side of the river in the Fingal area to prevent convicts escaping from Moreton Bay (Keats 1988:185). The post, set up by Commandant Logan, was abandoned shortly afterwards because of a clash between the guard and Aborigines of the Ngarabal clan, in whose territory it was located, apparently due to convicts 'taking liberties' with Aboriginal women. After that the Aborigines were particularly hostile, and Logan was eventually killed by Aborigines.

5. CEDAR

THEMES: NSW HO 9 Environment

AHC HT.03.03.04 Utilising forest resources

HT.03.03.04.01.03 Extracting rainforest/cedar

5.1 INTRODUCTION

From 1790-1890 the red cedar industry was one of the most important of Australia's export industries. Red cedar, *Toona australis*, was often referred to as 'red gold', perhaps because of its parallel history with the precious metal which thrust Australia into the world's financial limelight in the early 1850s, and possessed similar romantic connotations. The cedar industry was largely export driven, but from the 1890s onwards it declined to supplying the local market, and by 1965, the timber had become scarce, with the last cedar being used for the interiors of Sydney's first double decked electric railway carriages (Gaddes 1990:9).

Red cedar has no peer as a material for furniture and cabinetmaking. The richness of colour and grain are unique and it has no equal in its joining qualities (according to joiners of the NSWGR). The colour of the matured wood is deep red. Another factor of its uniqueness is its scent. The wood takes an extremely high polish, is very easy to work, and possesses a warm natural lustre. It has a strength to weight ratio greater than hardwood and is also very durable. Its major defect is its softness - it dents very easily. For this reason, and the fact that it tends to waterlog, it was by-passed by early boat builders in favour of white beech (Gaddes 1990:16,27). Cedar is very light and one of the few native trees that will float in water. This quality was taken advantage of by the early cedar cutters; however much of the Nambucca and Bellinger cedar was of such high quality that its denseness barely allowed it to float.

Cedar cutters opening up the country for others to follow was a typical pattern of the 19th century coastal strip of eastern Australia. Timber getters led a rough life, living in slab and bark huts near the centre of their operations. At first this was on the banks along the lower reaches of the rivers. Later, as the readily accessible and most prized timber from these areas was taken, the cutters were forced to penetrate deeper into the valleys and further up the rivers and their tributaries. Cedar was the prime target but other soft woods were cut. The practice was to raft or float the logs downstream, at least to a point at which they could be loaded into vessels of suitable draught - though never into an ocean going ship until the logs had been squared or cut into planks of convenient length. This was a precaution against movement of the ships' cargoes. The cedar logs were thus prepared by pairs of hand sawyers working in a sawpit.

Others soon to follow the cedar cutters were storekeepers, boat-builders, bullock-drivers, blacksmiths and hoteliers. In some areas, such as the Manning, the cedar cutters also opened up difficult inaccessible country for more permanent settlement (Ramsland 1987:24).

Cedar-getting fluctuated with the availability of resources and also the demand. The early 1840s saw a sharp decline in the demand for cedar for building purposes in Sydney because of economic depression. This coincided in areas such as the Manning and Macleay valleys with exhaustion of supplies of accessible cedar. In the 1850s the discovery of gold created a boom in house building and most of the cedar from the Richmond was shipped to Melbourne (Vader 1987:86). 1858 saw the biggest shipment made from the Tweed, followed by several quiet years, and then in the 1860s there was another resurgence in yield as free selectors harvested the remaining cedar on their blocks (Keats 1988:247). A later wave of cedar-getting in the 1880s, experienced on the Comboyne Plateau for example, resulted from another boom in housing and public buildings which were lavishly fitted out with cedar panelling and furniture, for example Payne's Hotel at Upper Tooloom (Heritage Item ID 3912117). After World War I the demand lessened as fewer houses were built of timber, interiors were painted and furniture styles changed. Outlined below is the progress of the cedar cutters north from the Hawkesbury River (Gaddes 1990:12, Kass 1989:11, Keats 1988).

Within a few years of European settlement at Port Jackson there was government concern at the rapid devastation of stands of cedar. Regulations were first issued in 1795 to control the felling of cedar on the Hawkesbury (Vader 1987:24). Later the rapid depletion of cedar in the Hawkesbury and Hunter areas, and then the south coast, led to a series of government attempts to regulate the industry.

AREA	PERIOD OF CEDAR CUTTING
Hawkesbury River	early 1790s
Hunter River	1801
Port Stephens	1815 through to the 1820s
Paterson and Williams Rivers	1820s until late 1830s
Hastings River	starting 1823
Manning River	1828, continuing to 1840s
Wyong district	1830
The Macleay	1827, early 1830s to late 1841
Clarence River	began 1835, well established by 1836, continued for around 20 years
The Nambucca	1842 till 1860s
The Bellinger	1842, continuing to the 1870s
Dungog area	late 1840s
Dorrigo Plateau	1857, timber carted overland to Armidale
Richmond River	1842
Tweed River	1829, not fully established till 1844
Brunswick River	1849
Coffs Harbour hinterland	1863
Head of the Hunter River	late 1860s
Comboyne Plateau	1880s

In 1819 it became necessary to apply for permission to cut a specified quantity and to state the number of men employed. In 1826 cedar cutting on unlocated crown land was prohibited. In 1833 magistrates were advised that persons doing this had to be prosecuted (Neil 1972:30). In 1835 licences to cut cedar on crown land were offered for sale, but later that year it was once again prohibited and timber already cut from crown land could be seized. Enormous tensions followed these efforts to control the cutting of cedar. An act in 1839 allowed once again for the sale of licenses. Avoidance of the regulations continued in areas of poor accessibility or, for example in the Big Scrub, where the forest was so thick and extensive that the cedar cutters were almost impossible to find.

5.2 CENTRAL COAST

Cedar cutters were in the vanguard of European expansion on the Hawkesbury River. Cedar grew in the vicinity of Windsor, at Richmond, and amongst rainforest on Mangrove Creek (Benson and Howell 1990:84). In 1791 samples of cedar along with other timbers and native plants were cut and sent to England. Once its qualities had been appreciated, 'from the sawpits of the Hawkesbury increasingly came the unusual aroma that identifies cedar sawdust' (Vader 1982:24). Logs were transported overland to Parramatta or by vessel down river to Broken Bay and around to Port Jackson. Demand increased and the returns to cutters and sawyers were high and constituted a strong incentive to harvest the red gold. Cedar became a magnet for many emancipists, free settlers and runaway convicts (Gilbert 1973).

The first export shipment of red cedar went to India in 1795 (Gaddes 1990:9). The consignment was made up of 60 large logs from the Hawkesbury (Vader 1982:27).

In 1803 illegal trafficking in cedar emerged, not for the first time. About this time advertisements were appearing for Hunter River cedar, suggesting that the Hawkesbury supplies may have significantly diminished (Rosen 1995:31). The commercial logging of cedar declined as the supply ran out, and local timbers such as blue gum, blackbutt, mahogany, ironbark, stringybark and bloodwood were increasingly exploited.

The cedar of the Brisbane Water district was located in the gullies to the west of Tuggerah Lakes, around the head of Wyong Creek. The first evidence of cutting in the area was a magistrate's enquiry whether a Mr James Bloodworth (who had been transported for seven years and became one of the pioneering cedar merchants) had permission to cut cedar in accordance with the regulation of 1826. Bloodworth maintained that he was cutting on his own land, although this appears not to have been the case (Moore 1978).

In 1830 fine stands of cedar were discovered near today's Wyong, attracting teams of men and bullocks from Newcastle (Vader 1987:64). Once the trees had been felled the logs were sawn into moderate sized logs at makeshift sawpits and then hauled by bullock team seven to ten miles to Wyong Creek. There the logs were lashed together, rafted down the creek and across Tuggerah Lake to a small landing on the lake shore just south-east of the present town of Toukley (Moore 1978). The logs were hauled by bullock drays about one

and a half miles to the small bay called Cabbage Tree Harbour, where the timber was piled on the beach until a vessel, assisted by a wind from the west, could come in, load up and ship it to Sydney.

The first licence issued in the area was to Frederick Hely on April 1st, 1835, to cut cedar from crown land at Yarramalong on Wyong Creek and at the head of Tuggerah Beach Creek. By 1841 more timber licenses were granted in the area for hardwood cutters than cedar cutters.

5.3 LOWER HUNTER

By 1801 the cutters had reached the Hunter River, and that year saw the first controls over cedar cutting introduced. In the Hunter District the right to cut cedar was reserved by the Crown, and up to the early 1820s cedar getting in this district remained a government prerogative - carried out by convict labour.

The Hunter River was exceptionally rich in red cedar, its tributary now called the Paterson River was known as the 'cedar arm'. Logs cut from the rainforests along the river flats were hauled to the banks, rolled into the stream, formed into rafts, and floated down to Newcastle.

Convicts from the penal colony set up at Newcastle in 1804 were employed in getting timber around the settlement. Maitland, was known as The Camp. It was a useful location at the junction of the Hunter and Wallis Creek, as the sawyers would float the logs down the streams. While Governor Macquarie was in the Hunter making a tour of inspection in 1818 he was informed on August 3rd of 'small colonial vessels lately gone to Port Stephens for cedar' (Vader 1987:44).

European settlement commenced in the Dungog area in the 1820s with the search for cedar logs along the Williams, Allyn and Patterson Rivers. Access to the cedar-bearing forests was achieved from the south by navigation up the Williams River to Clarence Town and along the Cedar Arm to the town of Paterson. Cedar was sawn into flitches and pitsawn boards and transported overland by wagon to Clarence Town and Paterson for shipping to Maitland, Newcastle, Sydney and for export. To some extent these two separate navigational/settlement routes have influenced commercial and social history with the western section being associated with the town of Maitland, and the Williams and upper Karuah Rivers associated with Dungog.

The cedar getters who worked the river flats and brush gullies of the main river systems in the 1830s established the first known timber getting activities in the area. However a basic watermill built by the A.A. Co. in 1834 at Stroud was used for both corn processing and timber milling for local use. Port Stephens was also used as an export port for cedar from 1817.

5.4 UPPER HUNTER

In August 1833 a request was made by a James Thompson to cut cedar on the Liverpool Range (Vader 1987:70) and as late as 1866 cedar was being cut near the head of the Hunter Valley. According to the Sydney Morning Herald of June 15th of that year

> the great drawback to the rapid development of the Mount Royal cedar trade has hitherto been in inaccessibility…As far as St Clair, about twenty miles from Singleton, the road is fair…beyond, difficulties commence… At present cedar is cut in different places at distances from thirty to forty miles from Singleton.

Ropes and pulleys had to be used to pull the logs out of 'abysses' and drawn on slides by bullocks to drays and taken to market.

Cedar was extracted from the Copeland area east of Barrington Tops in 1872, from the Dilgry River in 1880 and from Rawdon Vale in 1891, using bullock teams. Gold was discovered at Copeland in 1872 by two cedar getters Ted Bartlett and his brother-in-law Ned Saxby (Vader 1987:138). As the cedar which was considered accessible had been removed, hardwood operations commenced in about 1900 in the forests adjacent to Main Creek, Fosterton, and Bandon Grove, and by 1920 several mills were operating in the area.

5.5 MANNING

Initial settlement of the Manning occurred on selected lowlands adjoining the main rivers but expansion of settlement was soon stimulated by cedar cutters who moved northwards in response to diminishing supplies in the Hunter Valley. The tributary valleys of the upper Manning were increasingly opened up for clearing and grazing using stock routes originally surveyed by the Australian Agricultural Company.

No licenses for cutting cedar had been granted on the Manning River by mid 1936, but cedar cutting had actually begun in 1828 (Gaddes 1990:112, Ramsland 1987:24-28), soon after European settlement had started. One report from the Manning was of a man named Onslow who took up land along the river and sold some 200,000 super feet of cedar while clearing the ground for farming. He had felled it at such a fast rate that he had a backlog of 60,000 feet awaiting shipment (Vader 1987:64). On the Macleay River cedar cutting did not commence in earnest until the mid 1830s, although Commandant Innes of Port Macquarie had had a cedar party on the river bank near Commandant Hill in 1827 (Neil 1972:30).

The first licence applications were made in 1835 by Dr C.L.D. Fattorini, William Wynter and his son Thomas. During the 1830s Fattorini had under his employ more than 200 sawyers cutting cedar on the Manning and Macleay and a back-up transportation system to get the cedar to market. He also applied for a licence for the Macleay. The three individuals applied for licences to cover almost the entire Manning Valley, with the exception of the AA Company's holdings on the southern side of the river.

By 1833 William Wynter had 28 employees, including four cedar cutters, a boat builder and two shipwrights. His central objective in entering the shipbuilding industry was to cut out the middleman in the transport of his cedar. The schooner the ***Tarree*** was built by 1834 on his Taree estate. It was the first substantial vessel to be built on the Manning River and is known to have worked the cedar trade for a number of years afterwards (Ramsland 1987:29). Other cedar groups or parties of up to between 30 and 50 individuals were operating in the area in the 1830s, and the town of Wingham was known in those days as Cedar Party.

5.6 DORRIGO

The first settler in the Dorrigo area was Major Edward Parke, who set up Guy Fawkes River Station at Majors Creek. Other settlers followed, their interest being in open grass country for flocks and herds. It was not until the late 1840s that the scrublands began to be exploited for the wealth of cedar they contained. J.D. Lang reported that the brushes of the district abounded in cedar of superior quality, citing a tree he had seen which was 29 feet in circumference at the ground estimated to yield 30,000 super feet of timber (Vader 1987:70). The first scrubs exploited for cedar on Dorrigo were those in the neighbourhood of Tyringham, commencing a year or two before 1850. The cedar getters pushed through from the west and penetrated the Dorrigo, or, as it was then called, the 'Bostobrick Cedar Scrub' (Gaddes 1990:200-201). The industry is said to have been established in 1857, the year the Bostobrick run was taken up by M.Cloggen, believed to have been the first to send pit sawyers into the scrub (Vader 1987:70). Between Tyringham and what is now called Paddy's Plain there were a few pockets of cedar, but there was a 'regular harvest' to be had at Paddy's Plain. All of the timber was taken to Armidale on bullock wagons - a fortnight's trip.

It was well into the 1860s before any thought was given to settling for farming purposes. There was some settlement at Paddy's Plain. Extensive clearing was carried out for grazing and a lot of timber was wasted, partly through ignorance of its value but partly also because of the difficulties of getting it to market (Vader 1987;70). This area was closed for a period of time by the government to preserve the timber, but after World War I it was forced to open Paddy's Plain for returned soldiers.

5.7 NORTH COAST

The first European activity in the area north of the Hastings did not begin until cedar cutters moved into the Nambucca Valley in the early 1830s and to the Bellinger River to the north in 1841 (Townsend 1993:19-20). In 1842 the first ship entered the Bellinger River and sheep were introduced into the region. By 1844 cattle had also been brought to the area but the transportation of the cedar to Sydney was becoming a problem due to a lack of available shipping. Five years later, in 1849, the land as far as the present day town of Bellingen had become sparsely settled by squatters and cedar cutters and a boat building industry had commenced with the construction of the sailing ship ***Minerva***. The Bellinger River was reputed to be the

most prolific producer of cedar of all the rivers of Australia (Gaddes1990:113).

In the Nambucca Valley, because of the hilly and less fertile terrain, squatting proved to be less attractive. Little cedar was actually taken on the Nambucca in the early 1830s and '40s, but a second wave of cedar cutting was begun in the 1850s that ultimately led to the establishment of permanent European settlement in the region. A similar pattern of settlement occurred in the Bellinger Valley with the first land for settlement in and around Boat Harbour (later Bellingen) being taken up in 1863.

Cedar getters arrived relatively late to the Coffs Harbour hinterland, the lower reaches of the Orara Valley, which was settled by squatters during the 1840s. The cedar cutters arrived in 1863 and opened up the area, the process continuing as a result of the establishment of small scale settlements and impetus from the Robertson Land Acts (Coffs Harbour Shire Council 1986/7). By the 1870s the timber getting had been combined with small scale agricultural activities which had developed along the river flats (Yeates 1990).

During the period of rapid settlement and development, timber getting continued, with the major exploitation of the forests occurring in the 1890s when, following the decline in the availability of cedar, the development of jetty facilities at Woolgoolga in 1892 and Coffs Harbour in 1831, and the construction of bush tramways at Boambee, Coffs Harbour and Woolgoolga respectively allowed the export of hardwoods and removed the dependence on limited pasture areas for the maintenance of the bullocks that were used to haul the logs from the forest.

The Big River, the Clarence, soon came to the notice of cedar getters after Richard Craig had shown it to interested parties. Craig, a convict who had escaped from Moreton Bay, learnt of the area from Aborigines which whom he lived for a period of time (Gaddes 1990:171). Craig offered to show authorities the river and a party duly set out with him as guide. They traversed a track near a better one subsequently found and known as Craig's Line (Keats 1988:95), passing through Harness Cask, Paddy's Plain and Kangaroo Creek to the banks of the Clarence.

Squatting licences were first taken out on the Clarence in 1839, and most of the valley was taken up in a very short time (Sabine 1970:1:5-7). The cedar getters arrived some time during 1836. The first vessel to enter the Clarence was that of Thomas Small, who had a timber yard at Kissing Point, sailing to the Big River with 12 pairs of sawyers. Small established the first cedar base on Woodford Island in 1837. The second was set up by Francis Girard at Tyndale, not far away (Yeates 1982:1-2). Other timber getters soon followed and by 1842 the valuable timber had been worked from the brushes.

Pastoralists had arrived at the Richmond valley from New England by 1839. The existence of cedar was then known, but for a while cedar getters were busy exploiting the easily accessed cedar on the Clarence (Vader 1987:77). It was not until 1842 that the cedar getters moved north to the Richmond River, when a group of them led by Steve King travelled overland and established the first cedar camp above the present town of Coraki. The route they followed and their camping places are mapped in Daley (1968:30). They found what became known as the Big Scrub, an expanse of sub-tropical rainforest which extended north to the Tweed and west to Casino (Keats 1988:446). The first camp was made on the river bank near today's Codrington, opposite Pelican Creek. Soon other cedar cutters arrived, including eight pairs of sawyers and their families who had lately been on the Nambucca in the employ Mr Small (Daley 1968:31). Others came from the Clarence, the Bellinger and the Macleay. Camps were formed everywhere along the vast networks of creeks which flow through the Richmond valley. Sometimes the schooners came up the river to load the logs, sometimes the logs were floated down to the river mouth and loaded there. From sites in the hills the logs were stacked by a creek until brought down by a flood. For some time an important camp was located at Gundarimba on a pleasant well grassed plain (shown on Daley's map as on the western bank of the North Arm, three kilometres south west of the present township of that name). Other camps were at Bald Hill where, as at Gundarimba, there was good feed for bullocks, and near Cassino station. William Yabsley, who later established a shipyard near Coraki, cut his first cedar near Cassino.

As the reputation of the Richmond cedar spread, dealers and others were attracted to the area, and the township of Bulloona (now Ballina) developed. The number of sawyers who came to the Richmond in the early forties is not known, but in 1845 624,500 super feet of cedar was exported (Daley 1968:34), and the trade appears to have increased further after that. The Big Scrub was almost completely cleared in the 1880s (Curby 1997:91). Davis Scrub Nature Reserve is one of only a few small remnants of the Big Scrub (Heritage Item ID 3011867, Appendix 2).

Although the reserves of cedar on the Brunswick River would probably have been known soon after Robert Dixon's surveying and mapping expedition of 1840 (Keats 1988:79, 213), it was not until 1849 that the first cedar getters arrived from the Richmond. Steve King, who favoured easily accessible cedar on river banks

and appears to have been impatient with regulations, arrived with John and Edward Boyd. A major deterrent to exploiting cedar on the Brunswick was the inhospitable river mouth, which caused the wreck of one ship, the "Swift", in May 1849. Another, the "Clara", became stranded on the bar and was battered to pieces in April the next year. As it was there are records of only three shipments of cedar reaching Sydney in 1849, and King and the Boyds appear to have left the Brunswick in 1850.

Cedar getting on the Brunswick River resumed in 1860, Steve King's son-in-law Charles Jarrett being involved. The ships were loaded by a method known as surfing. The logs were drawn out to the surf by bullocks, met by boats, pulled by ropes to the ships and hauled on board by derricks, blocks and tackle. This avoided the problem of the dangerous river mouth, and enabled the cedar cutting to continue. In the 1870s the Brunswick was perhaps the major focus of the cedar trade, 50 to 60 men being employed (Keats 1988:220-221).

On the Tweed River the continuous harvest and transport of cedar commenced in 1844, when two parties of cedar cutters led by John Burgess and Paddy Smith arrived from Moreton Bay, where supplies of cedar were diminishing. Some spasmodic attempts to take cedar from the Tweed had occurred many years before, and some Tweed River cedar appears to have been rafted to Moreton Bay as early as 1829 (Keats 1988:184, 197).

The Taranora cedar camp was the first settlement established on the Tweed. It was located along today's Dry Dock Road, on the southern side of the Terranora Inlet, which links the river to the Terranora broadwater. This location was the most suitable when the first early harvest of cedar was in the Cobaki, Piggabeen, Bilambil and Duroby Creek regions. As the cedar cutters moved upriver the cedar was rafted down to Kerosene Bay, inside the estuary on the Fingal side (Keats 1988:243-4). Gradually, as there was a need to gain access further up the river, knowledge of the river grew, and in 1850 Thomas Boyd was cutting cedar from the southern side of the river and shipping from today's Chinderah. Ships were also loading from near Stotts Island, at Tumbulgum and eventually at Byangum west of Murwillumbah, where the middle arm joins the southern arm. The movement of ships in and out of the river mouth was influenced by the state of the bar and the tides.

The cedar ships from Sydney to the Tweed usually had little back loading apart from a few stores. They usually carried Sydney sandstone as ballast, which was discarded on arrival. Rocky outcrops of this stone were still visible on the fringe of Kerosene Bay in 1966 (Keats 1988:225). The first cedar ships from the Tweed for which there are records sailed in 1845, a total of four ships. For the period until 1870 an average of 12 ships per year sailed from the Tweed, each carrying an average of 30,623 super feet of cedar cargo.

The largest annual shipment to come out of the Tweed valley was 739,000 super feet, in 1858. This was followed by several quiet years, and then in the 1860s there was another resurgence in yield as free selectors harvested the remaining cedar on their blocks (Keats 1988:247). In 1870 the final downturn in harvest commenced.

5.8 CEDAR TODAY

The beauty and distinctive foliage of the cedar made it irresistible for timber cutters. It was truly the jewel of the northern forests, a wood of many qualities, lightness, deep honey-red colour, easy to use, to fashion into furniture, and to enhance the interiors of buildings, both public and private. So much of its habitat, the great shining brushes of the coast and the escarpment, has been cut out in the vanguard of the spread of white settlement.

The giant cedars are all gone and the cedar forests will not regenerate to their former grandeur because of focussed and careless exploitation in the 19th century. Attempts to regenerate cedars have been inhibited by the cedar tip moth (*Hypsipyla robusta*) which attacks the flowers, fruits and growing tips (Boland et al 1984:144), causing the tree canopy to spread, with the result that extremely tall trees with straight trunks are no longer to be seen. However there are still cedars growing in isolated pockets throughout the UNE/LNE region, and several of these trees are very large. Most of them are located in forests remote from our main centres of population. The following list is from the Forestry Commission of New South Wales (Vader 1987:199).

- Along the Bellingen-Dorrigo Road, both on the river flats and in the Dorrigo National Park.
- Dyke State Forest, on the Kempsey-Armidale Road. This is a small forest on the Macleay River, with a large stocking of this tree.
- On the banks of the Richmond River immediately opposite Roseberry Forest Park, near Kyogle.

- In the Big Scrub remnant below Rocky Creek Dam, in Whian Whian State Forest, near Lismore.
- In the Forest Preserve on Little Jilliby Creek in Wyong State Forest, near Wyong. Here and in the Dyke Forest and the Red Cedar Flora Reserve at Dorrigo, there are 'recovering examples' occurring in places that have been logged.
- There are moderately large cedars in an unlogged rainforest on Levers Plateau.
- There is a remnant of the Big Scrub at Eureka, near Alstonville, where there is an area of rainforest preserved by the original selector, Andrew Johnston, and his descendants so that the following generations would be able to visualise what the Big Scrub was like originally. This area of about 20 hectares, which was selected in 1888, is now vested in the Shire of Byron (Vader 1987:139).

The Commission's register of outstanding trees of all varieties includes seven cedars, all between 20 and 47 metres high. There are undoubtedly others of similar or larger size in various remote gorges and rainforest patches, including some in country designated as national parks, in stands that have not been logged and would most likely contain very large trees. There has been a fortunate tendency by the Commission to preserve big cedars even though rainforest harvesting was occurring in the vicinity.

Along the northern edge of what was the Big Scrub are rainforest areas with easy access to visitors, in Nightcap National Park, Border Ranges National Park and various other places where visitors can experience the exhilarating atmosphere of forests. In fact, all over the Richmond, Clarence and Tweed there are a surprising number of pink-brown tops to be seen in springtime, cedars either planted, bird-borne or saplings left standing after clearing (Vader 1987:140).

Scattered cedar trees can be seen growing along the Hawkesbury and Hunter Rivers. There are also cedars to be seen from the road along Cedar Brush Creek, past Yarramalong, including two planted in 1906 at the gates of “The Cedars” (Moore 1988) (Heritage Item ID 3913282, Appendix 3).

6. ABORIGINAL CONTACT AND CONTINUITY

THEMES: NSW HO 1 Aboriginal Contact

NSW HO 6 Land Tenure

AHC HT.03.03.04 Utilising Forest Resources

6.1 INTRODUCTION

The following themes have been selected to provide a framework for consideration of Aboriginal cultural heritage places in forest lands within the UNE/LNE CRA regions. In formulating these themes requirements of the brief have been taken as a guide. The AHC themes have not been used, since HT.02 'Peopling the Continent' refers to the last 60,000 years and is therefore not related to our brief; it could not be implying that in the historic past the land was unpeopled. The sub-theme HT.02.06.02 'Displacing Aboriginal People' does not allow for the continued existence of Aboriginal people on presently and previously forested land, and their participation in activities relating to it, both issues which form the substance of this chapter.

An attempt has been made to illustrate instances of cross-cultural interaction and by so doing demonstrate the heritage value thereof. We assume that there was much more activity of a cross-cultural nature, and Aboriginal participation in forest related activities, than we have been able to find references to. It has also been assumed that social values and historical associations are as significant as 'scientific values'.

The project addresses forested lands from the Hawkesbury to the Tweed and inland to the New England Tableland. It therefore addresses varying land systems, from temperate or sub-tropical rainforests to sclerophyll woodland. With the exception of New England the study area is comprised entirely of a series of coastal river systems and their hinterland. The nature of the terrain and vegetation influenced the character and timing of the European invasion of Aboriginal lands, and it also had a very significant impact upon the nature and effectiveness of the Aboriginal response, whether accommodation or resistance. A theme throughout this aspect of the history of the interaction between whites and Aboriginal people is that the forest, and particularly the mostly rugged areas where the forest remained, provided a haven for launching guerilla attacks or the maintenance of cultural and spiritual identity.

At present Aboriginal culture appears to be particularly strong on the north coast. This may be a function of the interaction between geographic location, environmental conditions, cultural determinants and historical factors. Where Aboriginal people have been more successful in adapting to the many changes brought about since the coming of the Europeans these changes appear to have been gradual, and have not cut off the strong ties with the land (Godwin and Creamer 1984:114). However the apparent relative strength of Aboriginal culture on the north coast could be at least in part an illusion created by the bias in available information relating to the north coast of New South Wales. In this area the work of Calley (1959), Hausfeld (1960) and McBryde (1974, 1978) has been followed by many others eg Creamer (1980a, 1980b, 1984), Byrne (1987, 1989), Rich (1989, 1990) and Langford Ginibi (1994). While some of these studies and others encompass areas as far south as the Hunter, they are relatively few.

Beginning with early contacts with European explorers, cedar getters and pastoralists, and continuing to the present day, this is in part a history of the struggle for control of forested lands. It involves Aboriginal responses to the appropriation of their land: 'dispersals', 'massacres', and dispossession. It also outlines Aboriginal efforts to regain control of some of their land, and their employment in and continued cultural use of forested areas.

6.2 EARLY CONTACTS WITH EXPLORERS, CEDAR GETTERS AND PASTORALISTS

6.2.1 Explorers

Only five weeks after founding the new settlement at Sydney Cove in 1788, Governor Phillip and a party of about forty men set out in a long boat and cutter to examine the surrounding countryside with a view to settlement (Vinnicombe 1980:IV:13). On a journey of eight days they had extensive contacts with Aborigines at Broken Bay, Pearl Beach and Brisbane Water. Without exception the Aborigines were extraordinarily friendly and welcoming towards the newcomers. The following year Hunter had further contact with the Aborigines of Broken Bay and the Hawkesbury, also friendly. However, 1879 was also the year that smallpox, of which Hunter found evidence, broke out amongst the Aborigines, drastically reducing the population.

Violence in the area started in 1797 with clashes between Hawkesbury shipbuilders and Aborigines. By 1804 the Aboriginal people were complaining to Phillip that settlement along the banks of the Hawkesbury was depriving them of access to their food supplies.

The first official expedition to the Hunter Valley was that led by Lieutenant-Colonel Paterson in the winter of 1801. Its purpose was to explore the lower part of the Coal River, as it was then known, and to determine the nature of the reserves of coal. This expedition ventured upstream to where Maitland is now, encountering a number of Aborigines in different situations. Again relations at the early encounters were friendly (Barrallier 1802:83, Grant 1803:154, Paterson 1801-2:175).

This trend continued on the Hastings, where the first European encounter was that of Oxley and his party returning in 1818 from their inland expedition across the southern New England Tableland. They came down the steep slopes to find travelling along the river relatively easy. Several contacts were made with Aboriginal people, who were numerous, and shy but friendly (Blomfield 1986:54).

The *Endeavour* sailed up the coast of New South Wales in mid May, 1770, making no landfall between Botany Bay and what is now Queensland. On the morning of 15th May Aborigines and Europeans had their first, albeit distant, glimpse of each other near the seven mile beach between Lennox Head and Broken Head (Prentis 1984:5). The Europeans observed a group of about twenty Aborigines of the Bandjalang clan for about an hour, but they in turn were ignored. In August 1799 Matthew Flinders landed on the southern side of the Clarence, near present day Yamba. He and Bungaree, the Aboriginal interpreter from Sydney, found three substantial vine and bark huts, but met none of the Jiegera clansmen. Initial avoidance by Aboriginals may have been because the Europeans and their ships did not fit into their world view (Prentis 1984:4-5). The first face-to-face contact on the northern rivers was in November 1823 when John Oxley and his party sailed into and named the Tweed River, looking for fresh water. They encountered a man and several women and children near Terranora, but as they left their departure was observed by two hundred people and accompanied by dancing and loud shouting.

Prentis suggests that where early contacts were with generally well educated, and perhaps more tolerant Europeans, they were mostly friendly (1984:7). It is also true that at this early stage the Europeans could not be recognised as representing the threat to resources and life that they were to become.

6.2.2 Convicts

First contacts in the Hunter, Hastings and Tweed valleys were associated with penal establishments. Convict establishments were set up at Coal River (Newcastle) in 1804, at Port Macquarie in 1821 and in the Tweed Valley in 1828. These establishments took up relatively little land and involved relatively few Europeans, who were greatly outnumbered by Aboriginal people (Rich 1990:21). However they were run by military men who tended to be unsympathetic and indeed regarded Aborigines as enemies (Campbell 1978:11). The brutality of the system would have been a shock to the Aboriginal people.

At Coal River and Port Macquarie the Commandants used Aborigines against the convicts. Aborigines speared and/or captured and 'brought in' escapées at both of these institutions. At Coal River an escapee was hanged for the murder of an Aborigine. Such incidents created considerable animosity between the convicts and the Aborigines, and later when the convicts went out as unsupervised servants to the new Hunter Valley pastoral stations, the Aborigines complained to the missionary Lancelot Threlkeld of

atrocities committed by these convict servants (Gunson 1974:49).

There were violent attacks at Port Macquarie by both Aborigines and Europeans almost from the start, and a stockade was built to protect both guards and convicts. Then in 1826 a new appointeee, Major Innes, established peaceful relations with the Aborigines and encouraged them to return escaped convicts. George James McDonald, at Rollands Plains in 1828-29, established excellent relations with the Aborigines, being taught their language, customs and beliefs, and taken on extended journeys into the bush (Blomfield 1986:55-59).

A guard post established on the Tweed River by Commandant Logan in 1828 to prevent convicts escaping from Moreton Bay (Keats 1988:185) was abandoned shortly afterwards because of a clash between the guard and Aborigines of the Ngarabal clan, in whose territory it was located, apparently due to convicts 'taking liberties' with Aboriginal women. After that the Aborigines were particularly hostile, and Logan was eventually killed by Aborigines. Many escapees lived with the Aborigines for months and even years, and Prentis (1984:7) suggests the possibility that the convicts may have stirred up the Aborigines against the authorities, especially if they were regarded as returned spirits.

6.2.3 Cedar Getters

On the coast the cedar industry generally preceded the pastoral industry. On the Hunter cedar cutters had arrived by 1801, before the penal settlement was established (Jervis 1953:97,99). On the Manning cedar was cut by the first pastoralists in about 1828, and cedar cutters were well established by 1834. On the Macleay there were a hundred cedar cutters by 1837, and on the Clarence cedar cutting and ship building were well established by 1838.

The cedar cutters were itinerant workers. They cut the red cedar from the brushes along the banks of streams, and having taken the best and most easily accessible timber, moved on, rarely making permanent camps. They focussed on cedar and intruded upon the Aboriginal hunting, gathering and spiritual environment less than the pastoral industry and certainly the agricultural industry which followed. Nevertheless instances of violence occurred. Actual and potential warfare sites, that is sites of murders and massacres are listed in Rich (1990:141-142).

In 1804 Aborigines had attacked botanist Robert Brown's boat and cedar cutters along the Hunter River (Brayshaw 1966:vii, Rich 1990:71). On the mid north coast relations between Aborigines and cedar cutters were initially stable. Aborigines worked with cedar cutters on the Nambucca, some of whom learnt to speak their language.

> They all claimed certain patches of cedar. One dared not show the other blackfellow's cedar to a white man, it being a crime. Owners of the cedar would sell it to us for rations. They would bring us little sticks about as big as a match, rolled up in a piece of tea-tree bark, or a congevoi leaf. Every stick denoted a cedar tree. We used to get them to help us fall the cedar and cut it, also to cut roads (Gaddes 1990:99).

Serious conflict arose on the Nambucca River resulting in murder of several cedar sawyers in the early 1840s and a great number of Aborigines being killed in retaliatory expeditions. A similar situation occurred in 1842 amongst inland Aborigines north of the Bellinger, where an additional reprisal resulted in the Yarrahappini massacre. In 1843 three white men were killed by Aborigines, one of whom was hung at Goal Hill, Port Macquarie, and in the late 1840s three sawyers were attacked on the Bellinger River (Prentis 1984:13).

Cedar getters arrived on the Clarence in 1837, on the Richmond in 1842 and on the Tweed in 1844. By 1845 the coast and lower reaches of the rivers had been taken over by the cedar industry. On the Tweed cedar was the only white land use until the 1860s (Rich 1990:121). Relations on the northern rivers were more peaceful than on the Nambucca and Bellinger.

On the Clarence Aborigines used to help locate cedar trees and crooked timber for ship repairs. Aboriginal men and women joined in clearing the brushwoods, felling trees and burning the timber, and some worked seasonally thereafter for employers known to them (Prentis:198412, Rowley 1972:111). With reference to the Clarence, Sabine (1970 1:7-8) stated that once the cedar getters had left, the Aborigines on the sea coast and the lower reaches of the river were better off than those further inland who were dependent on pastureland, since they again had exclusive access to the brushes which grew along the river banks, and ample opportunities for fishing. The Aborigines did not feel that their food sources were threatened, and in the scrub there was no complete dispossession until the

coming of the maize farmers at the end of the 1850s (Rowley 1972:111).

There were some clashes associated with Aboriginal 'thieving' and white abuse of Aboriginal women, and there is a record of one Aboriginal woman being killed and several men wounded (Rich 1990:121). The most notorious incident is known as the Woodford Island Massacre. Thomas Small had established a cedar base on Woodford Island in 1837. According to Prentis (1984:13) 'there is a tradition that suggests that the large part of a clan was virtually eliminated in the early 1840s'.

On the lower Richmond there were no reports of whites being injured by Aborigines. Aboriginal people were in fact of great assistance to the cedar getters, becoming axe-men, bullock drivers, rafters and ration carriers. An economic symbiosis developed between Aborigines and cedar getters. In exchange for rum, tobacco and tomahawks from the sawyers the Aborigines provided game, fish, honey and women (Daley 1968:35-37; Prentis 1984:13).

Prentis (1984:14) points out that the Bandjalang were the only clan whose territory by and large corresponded with an area of intensive cedar-getting. 'The fact that more of this clan have survived than almost any other in the Northern Rivers, is perhaps in part a testimony to the wisdom of their adaptation to the cedar trade'.

6.2.4 Pastoralists

The Hunter Valley was opened for settlement in the early 1820s. By 1825 over 360,000 acres had been promised to settlers and much of it was already occupied. There was a rapid increase in the white population and in stock numbers. In 1820 there were less than a thousand whites in the district, but by 1828 there were 3, 260, and in 1821 there were 236 cattle and 376 sheep, but by 1829 there were 46,800 cattle, 119,400 sheep and 11,300 acres under cultivation (Jervis 1953:114, Rich 1990:77).

Initially relations between whites and Aborigines were generally peaceful, but in 1826 a number of violent episodes occurred at various locations throughout the valley in what Miller (1985:34-5) describes as the Wonnarua Uprising. It is possible that the Aborigines were responding to, amongst other things, atrocities committed by former convicts, about which the Aborigines complained to Threlkeld (Gunson 1974:49). The Ogilvie's property at Merton, near the confluence of the Goulburn and Hunter Rivers, was a rare haven for Aborigines, and in 1826 Mrs Merton protected them from arrest.

In 1830 there were also violent incidents at Carrington, the Australian Agricultural Company base on the northern shore of Port Stephens. Relations there had been initally amicable under Robert Dawson, but Dawson's successor Sir Edward Parry did not maintain the fair treatment of Aborigines, and murders occurred in the early 1830s (Bairstow 1993:4-15).

The first squatters with sheep flocks reached the New England tableland from the Hunter Valley in 1832, establishing stations at Gostwyck and Walcha. They had reached Tilbuster and Saumerez near Armidale by 1835 and Tenterfield by 1839 (Campbell 1978:7). There is evidence of Aborigines helping the new settlers to find good land and water, as was the case with John and George Everett, when they settled at Ollera, near Mt Selim (Walker 1966:24). However violence on the tableland commenced almost immediately, and by 1838 numerous instances had occurred. The years 1839 to 1841 saw a bitter struggle for survival between the two peoples, extreme and frequent atrocities being committed by both sides (Campbell 1978:10). The Myall Creek massacre in 1838, and the hanging of the white perpetrators meant that many later incidents went unreported (see Milliss 1992). By the end of 1841, however, Aborigines who were still resisting had retired to the rugged gorge country on the eastern side of the escarpment, from where they kept up guerilla raids for a number of years.

Of the 13 potential sites identified by Rich (1990:98) for this period of interaction on the New England tableland, ten were warfare sites, including Deepwater, and the massacre sites of Bluff Rock on the Mole River, south of Tenterfield (Heritage Item ID 3911623), where a hundred or so Aborigines were driven over a cliff (Telfer 1980:23, 135), Beardy Plains, Darkie Point, Wellingrove, Cat Camp Creek and Aberfeldy. The other three sites listed are the stations where peaceful relations were established and maintained between whites and Aborigines, namely Balala, Tiara and Ollera. On Ollerra Aborigines were employed and the Everett brothers learned their language (Walker 1966:24).

On the Macleay white settlers arrived in 1836, and although there are recorded instances of good relations (Blomfield 1986 22, 25), these instances were far outweighed by instances of violence between Aborigines and whites, and Aboriginal resistance delayed white settlement on the upper Macleay. This

history of violence is described by Blomfield (1986), and Rich identified nine potential warfare sites for this phase of interaction on the Macleay and the Bellinger, including massacres at Sheep Station Bluff, Wabro Station, Kunderung Brook and Towel Creek (NPWS Nos #21-5-31, 21-6-100, 21-5-13 and 21-5-25 respectively).

Squatting licences were first taken out on the Clarence in 1839, and the whole valley was taken up in a very short time (Sabine 1970 1:5). Pastoralists arrived on the Richmond between 1841 and 1843 but settlement was sparse on the Tweed until the 1860s, and then it was uneven (McBryde 1974:165). Initially interactions were peaceful, but then violence developed. On the open areas of the Clarence and Richmond it was short lived, peace being re-established within three years. But in the rugged eastern falls country violent incidents continued until the 1870s. Aborigines attacked stock and shepherds, while they themselves were shot or poisoned. Ramornie and Kangaroo Creek are just two of many locations where violence occurred.

On the Tweed the relatively minor impact of the cedar getters was followed in the 1860s, as a result of the Robertson Land Acts, by intensive farming by small area farmers. This resulted in a rapid and catastrophic collapse in the traditional way of life (Prentis 1984:14). Disease undermined the ability of the Aboriginal people to withstand these calamitous changes. Smallpox was present on the Tweed early, and in 1865 hundreds of Aboriginals on the Tweed and Richmond Rivers died from dysentery (Rich 1990:123).

While the cedar industry might have had a relatively minor impact on Aboriginal life and culture, particularly on the northern rivers, the arrival of the cedar cutters nevertheless marked the beginning of the end of Aboriginal people's possession of the land. One of the first settlers on the Manning, William Wynter, who had arrived before the cedar cutters, wrote to the Colonial Secretary on July 28, 1834, and asked about the Aborigines' rights to the land and its cedar resources.

> Every Aboriginal Native on the Manning claims a particular portion of the land which he calls his Country. I should wish to have Instructions whether these Persons if they cut timber, are, in the opinion of the law officers amenable to the law of England (Ramsland 1987:33).

This question has not yet received an answer.

6.3 REGAINING CONTROL OF THE LAND

Towards the end of the 1830s the racial attitudes of the whites were changing, particularly amongst the wealthy and better educated. Humanitarianism was growing, in the British Empire marked by the abolition of slavery in 1833. The Aborigines Protection Society was founded in London in 1835, and branches were established throughout the Empire, including Sydney and Adelaide in 1838 (Miller 1985:65). This development also coincided with the ending of the perception by whites of the Aborigines as a threat. They began to be seen as a dying race, a belief which was reinforced by the publication of Darwin's opus on the survival of the fittest in 1859.

The first Crown Lands Commissioner for the area, Macdonald, took a benevolent view of the Aboriginal people, and blankets were distributed annually from 1839. During this period Aboriginals came or were 'let' in, camping on stations and around towns. For example five major 'blacks camps' developed on the fringe of European settlements in the Manning area, Brown's Hill near Taree (now a suburb of Taree), Saltwater, Larry's Flat, Kimbriki, and No 1 Station (Ramsland 1987:187).

Ramsland (1987:187) notes that in July 1863 125 blankets were distributed at Taree, while in 1865 175 blankets were received for distribution, and in both 1875 and 1876 125 blankets were received by Taree Police for distribution. These figures can be taken as a rough indication of the number of Aboriginal people living more or less permanently in the black camps of the district. Selected blanket distributions from Hunter region centres are listed in Brayshaw (1986:58). The distribution of blankets and also summer and winter clothing to those in need continued into this century.

At the village of Copeland, which had seen the extraction of cedar and gold mining (Vader 1987:138), clothing was distributed from the local store, which may still exist.

> Once every year the Government sent a grant of clothes and blankets to my grandmother's shop to be distributed to the tribe. There were crates of dungaree trousers of all sizes, also coloured shirts, fancy socks and large bloocher boots like the men on the land used to wear, also the large hats that the Australians themselves used to wear and still do. For the ladies there were crates of extra large frocks, all bright colours, the dark ladies

> love bright colours especially or florals with plenty of large coloured flowers all over them. It was only the most shy of the tribe stayed at home on those days, and the Copeland people used to get a real thrill helping the dark ladies choose the right size and most suitable to their contours (Simpson 1972:48-9).

In the Hunter Valley Aboriginal people had been working as 'hewers of wood and drawers of water' for some years prior to 1840 (Backhouse 1843:389). By 1840 Aboriginals were employed on Ollera station, and soon most other New England stations employed one or two, paying no wages, but often giving clothes and rations. Aborigines were employed over several generations by the Ogilvies at Yulgibar and also by the Bundocks at Wyangarie (McBryde 1993).

The Birpai on the Manning were a ready supply of cheap labour. After assisting the cedar cutters of the 1830s and 1840s, they worked for the settlers as path-finders and clearers of land. Many of the men became expert axemen and horsebreakers (Ramsland 1987:189). 'Blacks camps' were readily available labour pools for casual and intinerant work. Payment was usually rations and tobacco, and occasionally a few shillings. Aborigines worked at millet cutting and maize pulling, and they caught and bartered fish for tea and flour. Work was seasonal and not well paid. Several Birpai men worked in the timber industry and this necessitated their leaving their families for long periods of time.

A selector on the Nambucca, Marmaduke England, was employing Aboriginals in 1875, women as well as men. They worked as a group clearing scrub, although there seems to have been no monetary payment involved. Later that year, however, he paid some wages to Paddy, Simon and Billy who were also Aborigines (Townsend 1993:77). Aborigines were also employed as black trackers (Ramsland 1987:188, Wright 1971:18) and police stations operating included those at Georges Creek, on the Macleay River, Guy Fawkes and Kooka Bookra, the old gold diggings in the Ward's Mistake area, as well as at Hillgrove. Aborigines were employed on Glenrock Station near Barrington Tops as stockmen, as fencers, and in helping to snig logs off the steep mountain side (Simpson 1972:18-19).

Some small reserves were established in 1849, with a view to protection and assimilation. They were not intended for subsistence but as camping places in their hunting grounds and away from towns and inns. The reserves were not valued by the Aboriginal people at this time as they came to be later, partly because they had not been entirely displaced from their lands by pastoralism.

The discovery of gold in the 1850s greatly increased the demand for labour (Miller 1985:67, Campbell 1978:12), which led to many jobs for Aboriginal people at up to 20 pounds a year (Walker 1966:172).

Aborigines did not get the vote when responsible government came in, and they were ignored by the Robertson Land Acts of 1861, which were to have such a calamitous effect on their ability to have access to the land to which they belonged and which was the basis of their spiritual and cultural identity.

During the later 1860s and 1870s the Aboriginal groups of New England were heavily affected by intensification of European settlement following the Robertson Land Acts. They lost jobs and access to land as pastoral runs were cut up for small grazing selections and then increasingly for intensive wheat farming. The effect was also powerful on the Clarence (Yeates 1982:12) and Tweed (Prentis 1984:14). Parts of the north coast were less directly affected, although there was intensification of land use, first with sugar in the 1870s and then in the 1880s with new grasses and expansion of dairying with new technology (Goodall 1996a:71). However the upper reaches of most rivers were little changed in the 1870s, and pastoralism with dual occupancy continued in the Macleay and other areas. The coastal plain was more rapidly affected, but even here the growth of the white population was uneven. Settlement from Moreton Bay rapidly populated the far northern rivers area but left the middle coast, north from the Hunter to the Nambucca River, to experience a much slower rate of development.

In response to loss of land Aboriginal people took action to regain some control. In a few cases they were able to buy land by leasehold or permissive occupancy, like Willie Price at Port Stephens, William Ridgeway at Tea Gardens and William Drew at Kinchela near Kempsey (This and ensuing material largely from Goodall 1996b:176-177). Generally, however lack of funds or access to the bureaucracy prevented such formalisation, and Aborigines simply re-occupied their own country, squatting, building and planting crops. As Goodall states, the decisions to take such action were unrecorded, as were the events themselves, but when the government began to make inquiries in 1882, the existence of the reoccupations became clear.

The Pelican, Shark and both Fattorini islands in the Macleay River near Kempsey, for example, were not notified as reserves until 1885, but in 1883 police were reporting that up to 40 Aborigines, of whom they

named the heads of families, had been in occupation for some years, clearing and cultivating the land (APB Register of Reserves, folios 69, 70, 71, quoted in Goodall 1996a:83-84). At Gloucester, 60 Aborigines were supporting themselves fishing and growing vegetables on a portion of 35 hectares of church and school lands of which they had 'taken possession' (Report of Protector 1883:23). Along with three farms at Port Macquarie, where Aborigines had 'taken possession', was another example at Killawarra, near Wingham, where 100 acres had been occupied and parts of it cultivated by Billy Johnston a year before the land was reserved in 1883 (APB Register of R folios 60, 61, 65, 73).

These were not random and transitory campsites but were the Aborigines' active decisions to take back some of their land, like that of 'Frank' at Nambucca Heads, who 'occupied Brushy Island years ago [before 1883]' and that of the Guris of Cabbage Tree Island who were farming the island in 1893 after 'They themselves took possession [of it] a few years back' (A-PB Register folios 80, 186; Report 1893). Some re-occupations may have been less recent, with land occupied residentially from the early days of the invasion (at least) becoming agricultural bases over time. This was the case with St Clair, outside Singleton, where Aborigines had been camping since at least the 1850s and where they had already harvested number of crops of maize, tobacco and potatoes, before the land was finally reserved in 1890 (APB Register of Reserves, folio 41). Rollands Plains near Port Macquarie was similar, where police reported in 1887: 'Been occupied by the Aborigines for years and roughly cleared in which they have planted maize and pumpkins' (APB Register of Reserves, folio 60). At Armidale 'rather intelligent' half-castes were anxious to get a grant of land from the government, stating they were well able to manage it, but the general opinion was that they were better without it (Goodall 1996b:174).

Three elements were consistent in all Aboriginal demands for land. First, Aborigines were asking as an economic base from which to participate in the rural economy, and they usually planned agriculture or small-scale grazing. They called for full ownership but without the power to sell the land (ie inalienable freehold), in order to ensure that they could pass it on to their descendants. The final element was unique and central to all the Aborigines' demands: they were not asking for just any parcel of productive land, they were asking for land within their traditional country.

Land tenure increased Aboriginal self-sufficiency within the prevailing economy. In the 1880s Aborigines in the region were 80% self-sufficient due to a combination of employment and farming (Goodall 1995:74). On the coast from the Hunter to the Bellinger River Aborigines had been able to secure small areas of highly fertile land which, by the mid 1880s, were supporting about a hundred extended families by mixed farming and some dairying.

At Yulgibar on the Clarence Aboriginal people still hold Baryugil Square, land initially set aside for them by Edward Ogilvie (McBryde 1993:43). Details of Aboriginal allocation of land at Burnt Bridge, on the edge of Kalateenee State Forest, and an Aboriginal farmer with a patch of flourishing corn on the Hawkesbury River prior to 1930, are to be found in Goodall (1996b:pl iv).

6.4 RESERVES AND MISSIONS

In 1881 a Protector of Aborigines was appointed, succeeded in 1883 by the Aborigines Protection Board (Walker 1966:172). A system of protective segregation was adopted, with Aborigines being put on reserves and managed stations which were generally away from white society. Medical care, rations items such as agricultural implements and blankets were distributed. In north eastern NSW 126 reserves were established between 1883 and 1971, more than half of these in the Clarence and Macleay valleys (Rich 1990:25). Most of the reserves were inventoried by the Ministry of Aboriginal Affairs (McGuigan 1984), and according to Rich (1990:30) few others are likely to exist.

In 1909 the government, under the Aborigines Protection Act, distributed rations of food and clothing, with the power of controlling all movement of Aborigines in NSW. Under the Act there was a duty to provide for the custody, maintenance and education of children of Aboriginals, including power to indenture any child under an apprenticeship scheme. For example in 1932 a manager was appointed to the Purfleet reserve with new powers to concentrate people of Aboriginal blood on the station from the surrounding district. The Aborigines were not now allowed to leave the Reserve without permission. The official policy of protection was abandoned in 1940, the Protection Board being replaced by the Aboriginal Welfare Board, which took effect in 1941. The Aboriginal Protection (Amendment) Act 1943 allowed some Aboriginal decision making and introduced 'Exemption Certificates' for selected Aborigines. Known as 'dog-tags' these allowed Aborigines to roam freely on the land their people once owned (Ramsland 1987:189-191).

Most of the reserves were established between 1880 and 1920, although a number were later revoked, and others have been created since the 1950s (McGuigan 1984). The size of the reserves varied, for example Emmigrant Creek near Ballina was 28 acres, and Terania Creek was 39 acres, however others were larger, such as Kyogle at 115 acres (Byrne 1987, data from Guigan 1984). Approximately half the area of Woodenbong Aboriginal station, gazetted as a reserve 'for the use of aborigines' in August 1908, was revoked in 1937, leaving the present area of 126 acres (Hausfeld 1960:12).

The communities which developed at these reserves, including associated facilities, cemeteries and places of spiritual importance, became very important to the people who lived there. Creamer (1984) found that settlement cemeteries held particularly strong social values. The importance of the settlements is attested by Miller (1986) in relation to St Clair and Redbourneberry Hill at Singleton, by Cohen and Somerville (1990) in relation to Ingleba, and Calley (1959) and Hausfeld (1960) in relation to Woodenbong.

On New England only a small proportion of the Aboriginal population was supported by the Board in 1891- some fossicked for Rocky River gold, others shot and skinned marsupials, fished, cultivated a few acres on the reserves, kept a few pigs or poultry, or secured farm work. Walker (1966:173) suggests that the varying population of the reserves at different times indicates that the people travelled a lot in search of work and perhaps for hunting. However the children were sent at least irregularly to the public schools. In winter the Purfleet men used go up the river (into the forest) to snare possums and sell the skins (Ramsland 1987:190).

6.5 FOREST LAND USE

Aboriginal forest land use has continued throughout the contact period to the present day. It is significant as a 'refuge area' or retreat, as a source of raw materials and tucker. The forest is also a special location for the continuance of traditional ceremonial practice in the contact period (Ahoy and Murphy 1996:27).

For those living on reserves, particularly during their oppressive phase, the forest was a haven. At Woodenbong, for example, the reserve is located in a valley surrounded by forests. There the people would go into the forest often to get bush tucker (Byrne 1987:107), but also to enter an indigenous environment. For people under surveillance, in a period when the dog licence was required, for example, to enter the forest would have been to turn back the clock to a time when the land was indisputably theirs (Byrne pers comm).

In the 1840s the forest was used as a refuge from where guerilla attacks could be launched upon invading whites, and it continued to be used as a refuge by fugitives from the law. In the 1860s, Fred Ward, better known as the bushranger Thunderbolt, frequented the Hawkesbury River district and later the Hunter Valley and near Gloucester. He was often seen in the Segenhoe and Moonan Brook areas, generally using the Barrington Tops area as a refuge. Thunderbolt restricted most of his stealing to the New England Tablelands around Armidale and Uralla (Prineas and Gold 1983:194, Camm and McQuilton 1987). A half-caste woman named Yellilong kept watch for Thunderbolt on many of his raids, and bore him several children. The children were adopted by sympathetic farmers after Yellilong died near Muswellbrook in 1868 (Prior et al 1966:52-53). In 1901 the 'Breelong Blacks', Jimmy and Joe Governor (who were both part white) were pursued through the Falls country at the head of the Hastings and Manning Rivers for the murder of seven whites (Blomfield 1986:63-73, Wright 1971:18).

The forest as a source of bush tucker was an important resource for Aborigines, enabling them to enhance their rations on the reserves, and also standing them in good stead during the depression and at other lean times (Byrne 1987:107).

Aboriginal people also used the forest for collecting timber or raw materials. Victor Perry spoke of the people at St Clair collecting wood to make traditional artefacts for sale at a time when it was fashionable to have collections of these items.

On the north coast the maintenance of language and spiritual observances, plus knowledge of locations and care for them, is a feature of early Clarence and Richmond societies (Gumbaynggir and Bundjalung) (McBryde 1997312:313). Initiation ceremonies were held in the 1920s and 1930s at Petroi, south of Ebor, and possibly also the nearby Serpentine sites (McBryde 1974:45). In her study relating to the Nymboida, Kangaroo River area of the Clarence valley McBryde (1996:18) found considerable evidence of continuity of tradition, and saw the presence of forest to be significant in this. McBryde cites Creamer's (1983:44-45) conclusion that there was strong cultural continuity of cultural knowledge amongst both individuals and communities on the north coast, and that an important factor in this was the continuity of residence in their own country and language area for many communities

and families. It made possible transmission across generations of knowledge about cultural practices together with information about the actual locations and places in the landscape associated with them. McBryde continues

> The topography of the northern rivers landscape also provided large areas of rugged or densely forested escarpment country, remote from settlement and sparsely used by graziers. These offered physical opportunities for communities to maintain in privacy ceremonial activity and cultural practices such as hunting and food collecting.

The types of places of which there is continuing maintenance and care of, and knowledge of, include ceremonial sites (eg male initiation) and increase centres for plant and animal species, or places of power, dangerous or sorcery places, the *djurbil* and *mirera* sites discussed by Radcliffe-Brown (1929). South of Yamba, near Wooloweyah Lagoon, Godwin and Creamer (1984:104) found that good food places and recent camping places were also highly valued sites which there outnumbered other categories of significant places.

Many sites significant to Aboriginal people are or were within forests. Cane (1990:59) was told by one Aboriginal man that the forest was 'the blanket which protects our sites'. Ahoy and Murphy (1996:2) comment on the fact that there are still significant Aboriginal sites and places in forests which have not yet been recorded by the National Parks & Wildlife Service (and are presumably also unknown to State Forests), as secrecy has been the traditional way of protecting sacred sites and information.

The uncleared, often rugged landscape where forests remain are seen to be part of the Aboriginal cultural heritage because the forests' 'untouched' appearance provide a link to the traditional landscape (Byrne 1987:109, Ahoy and Murphy 1996:25). In 1842 a similar view was expressed to Edward Ogilvie by Toolbillibam, a Bandjalang leader:

> Begone, begone, and take away your horses; why do you come hither among the mountains to disturb us? Return to your houses in the valley, you have the river and the open country, you ought to be content; and leave the mountains to the black people. Go back - keep the plains and leave us the hills. Go, go, begone (Ogilvie 1842).

6.6 PARTICIPATION IN FOREST RELATED ACTIVITIES

The timber industry has long been a mainstay of Aboriginal employment, from the arrival of the cedar getters to the present, whether it has been cutting sleepers or pit props, working in saw mills, such as Ford Timbers Mill at Woodenbong (Heritage Item ID 3911969, Appendix 2. An attempt was made to set up an Aboriginal saw mill at Woodenbong - Hausfeld 1960), or in forestry. Forest work has therefore been an important area of interaction between Aborigines and non-Aborigines.

According to Hausfield (1960:55-57) on the Woodenbong station the main employment for males was in the timber industry, which provided all the permanent positions available, with the exception of two positions as handymen on the Aboriginal station itself. There was casual work for men on farms, land clearing, fencing, corn pulling and potato picking. There was also occasional labouring and domestic gardening work in the towns from time to time. The work available for women was almost entirely casual and restricted exclusively to work as domestic servants. The male work force contained highly skilled men in all phases of the timber industry except engineering and management. Because of limited opportunities very few of the women could be described as skilled, because their work was generally confined to washing, ironing, scrubbing and polishing, and because of the casual nature of the work. Almost all males and females sought work within the Bundjalang tribal area. Calley (1959:33) found that the lack of work opportunities for girls had resulted in them staying longer in school than boys, and getting a better education.

The current employment of Aboriginal people in the timber industry is somewhat lower than in the past (Ahoy and Murphy 1996:27, Byrne 1987:107). Forest work has nevertheless continued until recently to be important to Aboriginal men, a number of whom were consulted for this project.

Steve Randall, presently of the Deerubbin Local Aboriginal Land Council, but from the Maclean area, stated (29.4.98 pers comm) that a lot of people worked in timber mills in the Casino area. There were also mills at Kyogle and Camira Creek. John Close of Woodenbong worked for Forestry as offsider to the foreman, who was in charge of selecting trees to be cut.

Steve's uncle worked in the mill at South Grafton. Steve himself had worked for forestry on the roading gang at Casino, driving a D8, putting in roads near Woodenbong to provide access to the timber. Steve's brother Clarrie Randall and his cousins Philip Olive and Harold Close (John Close's nephew) are working for forestry now. Steve's grandfather and his son, Steve's uncle, also worked for forestry, making three generations. Another of Steve Randall's uncles, Kevin Breeburn, with a friend Sammy Smith, was cutting timber for a mill at Ulong, between Dorrigo and Coffs Harbour, in the 1950s.

Steve said that Forestry was always the biggest employer, because the timber had always been there. There was a mill in Maclean, but Steve's family had worked in sugar cane there.

Two Aborigines working for Forestry at Kempsey were the boxers Tommy and Dave Sands, both of whom worked as timber cutters.

Nathan Moran of the Birpai Local Aboriginal Land Council, whose family are from Burnt Bridge, near Kempsey, said that his grandfather, William Henry Holton (traditional name Goola), who was born at Rollands Plains in 1923, had been a timber cutter from the age of eleven until he went to WWII, and then continued cutting timber until he was in his late 50s. Timber had been the only source of work for Aborigines then.

Jeff Bradford, formerly of the Worimi Local Aboriginal Land Council, said that some Aboriginal people in the Port Stephens area worked in the timber industry, which was restricted to the cutting of *Angophora* sp for masonite, but that most worked on oyster farms. In 1950 the Masonite Corporation (Aust) Limited had a forestry programme based on a sustained yield forest estate of 80,000 acres on second class terrace and foothill country situated north and east from Raymond Terrace to the neighbourhood of Stroud and Buladelah (NSW Premiers Department 1952:28).

Les Murray, the well known Australian poet, writes of men who worked in the forests in the Wang Wauk and Buladelah State Forests, including his father, cutting for the Masonite Corporation. Among those he names are 'the Aboriginal family of French, Harry and Morgan in the older generation and then their sons Clarrie and Bill, who was called Plugger' (Murray 1997:58-63).

Victor Perry of the Wanarua Tribal Council said that his great grandfather Jack Miller had worked in the Scone area earlier this century cutting wood for clearing. Kevin Kavanagh, also Wanarua, presently with the Deerubbin Local Aboriginal Land Council, mentioned having had a couple of uncles who worked in the timber industry. This pattern also holds in the lower Hunter and central coast area, where Tommy Sales and others worked cutting timber for mine pit props and railway sleepers.

Aboriginal participation in forest matters extended to protests against logging at Terania Creek (Heritage Item ID 3911873, Appendix 2), at which a number of Aboriginal elders were present. According to Jolanda Nayutah of the NSW Aboriginal Land Council (pers comm 11.8.98), who was present at Terania Creek, this was the first time conservationists and Aborigines had worked together for a common cause.

7. LAND TENURE

THEMES: NSW HO 6 Land Tenure, surveying

AHC HT.02 Peopling the continent

This short chapter outlines briefly the systems of land tenure in the northern sectors of NSW, how they were changed with the coming of the Europeans, and how a very different system was put in place to enable white settlement. The dividing of land by mathematical survey, changed the conceptual face of the country, and directly led to a change in utilisation of resources.

7.1 THE SYSTEM OF SURVEY

The system of survey, though it was introduced into the Nineteen Counties around Sydney in the 1820s, when the surveyors had enough time to traverse the land and mark out definable portions, could not be introduced over the whole state in so short a space of time. This led to a dichotomy where land was initially granted in small parcels to emancipists and emigrants, and in larger parcels to people who could demonstrate that they had the capital to develop and stock the land they were granted. Aborigines were left out of the equation, for they were perceived to have no understanding of the new system.

When the land parcels were no longer granted to applicants, but sold, after 1831, the pastoralists were pushing out beyond the boundaries of the nineteen counties, and a system of leasehold was adopted as a means of exercising some state control before this land too, could be marked out in a geometric grid.

On the North Coast of the state, beyond Port Macquarie, and inland over the Liverpool Range, pastoral leases of large dimensions were allowed to squatters who were establishing their flocks and herds far from Sydney. The squatters appeared from the western side of the Dividing Range at much the same time that the cedar-cutters were marching north from the central coast, in the 1830s to 1840s. They co-existed until 1861, when the Free Selection Acts were passed in NSW, (and in other states about the same time).

The squatters' lands, held under leasehold were then withdrawn, and offered for sale to small holders in smaller parcels, mainly of 320 acres. The squatters themselves were eligible to buy land, and the system of dummying was exploited, but the landscape in most areas along the North Coast, was changed from pastoral uses to attempts at small farming. The farmers had conditions attached to their purchase by instalments: the land was to be lived on, fenced, and cleared (Proudfoot 1995:157-161). This was the great mistake of the legislators. Not being properly informed, or over-anxious to break the squatters' control, they did not monitor the consequences for the environment.

The environmental tragedy has been working itself out since this time. The resources of the region, robed as it was with a mantle of forests, were seized upon and converted to useable timber. Land, to be retained had to be cleared: in many cases, the timber was not even used; it was burnt. These structural faults in administration, once put into place, were hard to re-think and remove.

7.2 PLANNING TOWNS AND TOWNSHIP RESERVES

Another system, alongside that used for the subdivision of rural land, was put in place for the towns after 1829. In each County, several town and village reserves were surveyed and removed from sale for a time when the communities started to form. They were surveyed near a river crossing, mostly on flat or gently sloping land. The towns were marked out according to a predictable grid plan, with square sections, and allotments varying in size, but mainly at one quarter or one half an acre. They

were placed within a larger Township Reserve, which could be used later for the extension of the town, for public or institutional uses, or for parks and open space.

When the town was surveyed, and the plan approved in Sydney by the Legislative Council, the allotments were put up for sale, usually by auction.

The towns of the North Coast had particular problems, especially when the rivers, with the timber from the banks cut out, started to silt up. Another major problem was the approach from the sea, over sifting sand-bars. Many boats were wrecked crossing the bar. The major towns were sited at the head of navigation, usually some way in from the coast on the rivers, which were large compared to most Australian streams.

Around the towns and their Township Reserves, a buffer zone of small farms was usually surveyed, farms varying from ten to 25 acres (Proudfoot 1995:162-65). The towns attracted small tradesmen, professional men, shop keepers, inn keepers, shipping agents, stock and station agents, churches, schools, and timber mills. Livestock markets were held there. The best of the towns became populous places, but their fortunes tended to vary, reflecting the prosperity or stagnation of their district. This subdivision structure, however, lay behind their development.

7.3 FOREST LAND TENURE

In 1910 provision was made for the dedication of State Forests and Timber Reserves. Dedication as a State Forest makes it much more secure than the reservation as a Timber Reserve. State Forests, in order to be revoked, must be put before both Houses of Parliament and a resolution specifically made. Even more secure is a declaration of National Forests used from 1935.

Many Timber Reserves have been revoked for settlement, some have been upgraded as State Forests. In 1985 there were 177 Timber Reserves and 781 State Forests statewide. Within a State Forest, Forest Leases or Occupation Permits can be issued for grazing. In Timber Reserves leases or permissive occupancies may be issued by the Western Lands Commission subject to the approval of State Forestry.

In 1982, the NSW Government decided to phase out rainforest logging. The National Parks Reservation Act revoked the dedication of 104,045 hectares of State Forest, National Forest, Flora Reserve and Timber Reserve, transferring control from Forestry to the National Parks and Wildlife Service. To alleviate the impact on the timber industry, a special allocation of funds was made to allow the Commission to purchase 30,000 hectares of valuable hardwood forest and plantations (Grant, 1988:60-62).

8. MINING

THEMES: NSW HO 7 Mining

AHC HT.03.03.03 Utilising mineral resources

HT.03.03.03.01 Mining for gold

HT.03.03.03.02 Mining for coal

HT.03.03.03.03 Producing lime and cement

HT.03.03.03.07 Mining for tin

HT.03.03.03.09 Mining for other resources

8.1 INTRODUCTION

Mining has been practised extensively in the UNE/LNE area. The main minerals sought have been gold in the UNE and coal in the LNE. Places have been mined according to the technologies available, the changing prices for minerals on the market, and the desperation of the miners. For example in the 1930s depression men and women who were unemployed went out to old mining areas panning and mining gold to try and make enough of a living to keep them alive.

Many minerals have been mined in the UNE/LNE. For example in the late 19th c and the 20th c in the New England region attempts have been made to exploit deposits of molybdenum, tungsten, copper, antimony, arsenic, manganese, coal, ironstone, silver, bauxite, diamonds and sapphires. Gold has also been mined, but it has not been a profitable investment. Only tin has been economic (Premiers Department 1951:9).

There are mining sites all through the State Forests and National Parks in the UNE/LNE. With cedar getting, shipbuilding, or the heyday of logging the forests, the evidence of the extraction is the absence of trees. Very few living quarters of the timber getters can be seen. On the other hand many of the sites of mining remain visible in the landscape. This is partly because mining is revived by prospectors whenever there is a depression, and they go over the old mining sites, searching through the tailings, or reopening the mine shafts, so that the land is disturbed and the earth turned over again. The land is dotted with holes and mounds, and regrowth of trees, for mining is devastating to forested areas. In the photographs of the Hill End mining area, west of the LNE, there is not a tree to be seen for miles. In the Western Australian goldfields of Kalgoorlie and Coolgardie the vegetation all around was cut down to the horizon, and special trainlines called 'woodlines' went out in the bush to carry the cut logs back for the steam boilers in the ore crushing plants (Bunbury 1997).

8.2 MINING FOR GOLD

Gold was discovered in NSW in 1851. The early gold discoveries were made on Crown Land and the issuing of a miner's licence legitimised the occupation of the Crown land.

Contrary to the idea that alluvial mining was not replaced by quartz mining until all the alluvial gold had been won, quartz mining took place almost from the beginning. By mid 1852 at the Great Nugget Company's Louisa Creek site there were houses for managers and superintendents, huts for 80-100 men, a crushing house, steam engine, and amalgamation equipment. The alluvial workings were mechanised, processing 70 carts of alluvium a day (Fletcher 1976:110).

The gold rush of early 1850s increased the price of cedar dramatically, and led to a rush on cedar cutting as well, by those men who hadn't joined the goldrush, left in the rainforests.

8.2.1 Upper Hunter

Gold was discovered in 1852 at Moonan Brook and Stewarts Brook villages by two stockmen from Glenrock Station. There was a minor boom with up to 400 men working in each of the diggings, but they gradually declined between the late 1850s to 1900. The Denison

Diggings at Moonan Brook featured 4 hotels and a water-powered stamping battery in its heyday. In the 1890s gold was found within the Hunter Valley at Stewarts Brook and at Woolooma. This led to an increased population around the town of Scone, and a boom for the shopkeepers.

Since the 1930s depression the gold reefs in the Upper Hunter have been little worked. In the headwaters of Omadale Brook, Moonan Brook and Stewart's Brook the many old gold reefs from the 1850s are still there; but these are hardly worked now. In the 1947 census only 2 gold miners were recorded (Premiers Department 1952:44).

8.2.2 Manning River

In 1876 Saxby and Bartlett discovered gold in Back Creek near Copeland west of Gloucester whilst searching for cedar. Originally called the "Barrington Diggings" Copeland became a boom town reaching a population of 3,000 people and boasting 51 reefs with colourful names like "Hidden Treasure", "Mountain Maid" (Heritage Item ID393080,Appendix 3) and "Prince Charlie" being worked. Copeland was named after the Minister of Mines, Henry Copeland, who came and inspected the area. Copeland Village flourished with 26 businesses and 8 hotels, far bigger than Gloucester and Barrington villages at that time.

Other diggings were established in nearby localities like Bowman River, Cobark, Rawdon Vale, Boranel, Coneac and Little River from about 1880 onwards. The Cobark Diggings featured a grocery and butchers shop and two 10 head stamping batteries in the Twin River area in 1880.

Gold mining in the area declined rapidly with the majority of miners gone by 1900.

Dungog Area

In the Dungog area there was a mining boom around the turn of the century in the Wangat River area and also within Whispering Gully which is now part of Chichester State Forest.

Cells Creek, c60km west of Wauchope

The second focus of mining activity in the Manning River area was initiated during the late 19th century in the vicinity of Cells Creek, about 60 km west of Wauchope where gold had been discovered by an escaped convict. The site is marked on the SF Port Macquarie Map in Doyles River SF 911 as 'Disused gold mine.' At that time a boarding house, run by Mary Anne Coombes, operated at the mining field and the area was supplied by pack horse, as it was so remote and mountainous. The stamper batteries, used to crush the gold-bearing rock, were run by a water wheel (Hannah 1979:3). Quartz seams at the Cells Creek gold area were also worked between 1920-39, 1956-58 and 1964-66. Most of the mining relics now extant in the area probably belong to these latter periods.

8.2.3 North Coast

Gold was first found near Woolgoolga along the Orara River in the 1870s (Yeates 1982:70). Remains of the diggings are in the Bagawa State Forest near Nana Glen where a drive on the site of the Lady Matilda Mine can be seen (Yeates 1982:69).

In the 1890s gold was found at other places around there and by 1895 there were 220 men on the Orara Gold Field. In the Wedding Bells State Forest several deep shafts can also be seen. As with many other old goldfields, prospecting was revived in the 1930s Depression as unemployed men left the cities and tried to eke out a livelihood (Yeates 1982: 71-72).

Dalmorton, about 60 km south west of Grafton, one of the towns on the route between the Clarence and the Tablelands, became a goldrush town in the 1870s. The Dalmorton cemetery dates to this period (Heritage Item ID 3904448). Fossicking and small-scale mining continued in Chandler's Creek, south of Dalmorton. In the 1890s Dalmorton was a frontier town with about 4,000 miners (Williams 1992:12). South of the town in the Chaelundi SF is a large Abandoned Gold Mining Area marked on the Glen Innes SF Map. There are still a lot of fossickers around the area. There was also goldmining all around the Dorrigo area in the last decades of the 19th century. Mining and fossicking continued until the 1930s. There are still many open mine shafts. Here in the depression men panned for "colours" to make a living (Curby 1997:98).

Coff's Harbour

Gold was discovered north west of Woolgoolga near Glenreagh in 1881.

The population in the area increased, bringing prosperity to the Coffs Harbour area. The increasing population which had largely been brought about by the discovery of gold near Glenreagh in 1881 (Forestry Commission 1984a:).

Urunga and Nambucca

In the 1880s the mining of gold and antimony commenced at Urunga.

Near Nambucca the Deep Creek (Valla) Gold Mine opened in 1891 and a big mining camp was established there (Townsend 1993:82).

8.2.4 NEW ENGLAND REGION

Hillgrove

Gold was distributed over a wide area in the New England region. The most important mines worked were at Hillgrove and Drake.

There are old gold diggings in the Ward's Mistake area, as well as at Hillgrove. Most of the mining villages in New England are now abandoned.

The social and economic structure of New England was considerably altered in the 1850s by the discovery of Gold at Rocky River near Uralla and other places. By 1856 there were 3,000 people on the Rocky river field and boom conditions continued until 1859. By 1860 it had slowed down and continued to decline on every field on the New England plateau. By 1866 the Rocky River field was almost exhausted.

The effect of these discoveries was the growth of towns to service the miners.

From 1870-1900 the most important single factor in economic development in the area was the discovery of minerals. Tin discoveries in the 1870s and gold in the 1890s stimulated the region's economy (Premier's Department 1951:7).

Gold was discovered at Hillgrove east of Armidale and active prospecting began in 1881. By 1889 16 major companies were at work and employed 497 men. Output continued to increase until 1894 but after that it declined. By 1921 the town of Hillgrove which had once contained 3,000 residents was described as a "scene of utter desolation" (Premier's Department 1951:9). During the boom period for Hillgrove thousands of people moved into the area, and Armidale enjoyed a short period of growth.

Nundle

Nundle is located east of Quirindi on the edge of the New England tableland. Hanging Rock is just to the south, and Bowling Alley Point to the north. There were major gold rushes to the area in the 1850s and 1860s.

In Jan 1852 gold was discovered by washing river sands at Hanging Rock at the head of the Barnard River, a tributary of the Manning River. From about 1852-54 there was alluvial gold mining for miles around Hanging Rock in every direction. Some of these sites would now be in Hanging Rock SF and Nundle SF. Above Hanging Rock Nuggety Gully was a rich field. This is now part of Hanging Rock SF. Stores and inns opened in Hanging Rock in 1852, and other hamlets sprang up where the diggers were congregated.

In the early 1850s the name Hanging Rock extended over a wide area from the head of the Peel almost to Bowling Alley Point and on the tableland to the Dividing Range.

In the late 1850s Bowling Alley Point became the centre of the Peel River diggings. This area is marked on the Walcha SF Map as Crown and Leased Crown land. In the 1860s alluvial mining was no longer profitable and mining then took place exploiting the reefs. Bowling Alley Point became a very important gold centre and the whole field was covered in tunnels and shafts. There were "innumerable" miners. By March 1852 200 diggers had joined the rush to Bowling Alley Point and much gold was found (Bayley 1953:23).

Towards the end of 1863 the first steam quartz crushing machine in the area began operations. In the early 1860s the rusted iron footbridge 'which today stands as a rusted landmark leading over the Peel to nowhere at Bowling Alley Point was erected...' (Bayley 1953: 36). The need for water to wash the crushings led to races being built from creeks and streams to where the water was needed. Two Sheeba Dams were built in 1888 and are still used by the community for swimming and fishing (Bayley 1953:36-37). These are marked on the Walcha SF map as being on a Crown Land Recreation Reserve.

In the 1880s and 1890s there was intensive reef mining at Bowling Alley Point and Hanging Rock. Nundle boomed, with many batteries and crushing machines.

The town of Nundle was at the crossroads of the routes connecting Tamworth, New England and Hanging Rock with the Hunter River settlement by way of Crawney Pass. It was also at the centre of the goldfields and head of Peel River Bayley 1953:38-39).

From the 1870s alluvial goldmining in the area almost ceased. In 1872 Hanging Rock was reported by the Sydney Mail August 24 to be a ghost town.

The Europeans would leave a field and the Chinese miners would carry on scraping a living by alluvial mining. In the 1930s depression the unemployed went alluvial mining on the old claims, but no serious mining was carried out by this time.

8.3 MINING FOR COAL

8.3.1 Hunter Valley

The Hunter Valley is undergoing heavy industrialisation, mainly due to the introduction of open cut coal mining in the Muswellbrook/Singleton area and the construction of major power stations at Liddell and Bayswater.

Lower Hunter

The centre of the region is developed on Upper (mined early) and Lower (mined from 1900) Coal measures which provide the mining and industrial character of the region.

James Grant in the Lady Nelson surveyed the Hunter River in June 1801 and reported on the timber and coal he found in the district (Crowley 1980:103). At the Newcastle convict settlement from 1804 the convicts toiled at coal mining.

Upper Hunter

Nearly all mining in the Upper Hunter is for coal, both by tunnel and open cut methods. (Premier's department 1952:44). Coal is found in many collieries at Glendon Brook, near Muswellbrook, Liddell, Ravensworth, Kayuga, Overton, Roxburgh, Muscle Creek, Numndah, Rix's Creek, Ovingham, Broke, and Jerry's Plains.

Formerly entirely rural by contrast with the Lower Hunter, open cut coal mining has recently developed in the Upper Hunter on a large scale, affecting the towns of Singleton and Muswellbrook.

8.3.2 Manning River

Upper Manning/ Gloucester Area

The A.A. Co. ran into problems in 1856 and phased out the Gloucester area in favour for the Peel River Estate. Frequent floods and droughts made agriculture difficult, and there was a shift in emphasis in the A.A. Co. management from agriculture to mining. In 1856 a geological survey was instigated and revealed potential deposits of limestone, coal and iron ore.

Recently, mining interests have been rekindled since the earlier studies of 1856 and 1922 confirmed rich coal deposits in the Avon River Valley.

8.3.3 New England

A large coal deposit was found near Ashford. This is the only recorded coal deposit in the region.

8.4 PRODUCING LIME AND CEMENT

Lime kilns have been found and conserved at Piper's Creek (Heritage Item ID 3904234, Appendix 3) near Port Macquarie in the Maria River State Forest. These were made and used by Port Macquarie convicts and are discussed in Chapter 4 of this report.

8.5 MINING FOR TIN

New England

The New England region contains the state's principal deposits of tin. It is mostly found still at Emmaville, Tingha and Torrington.

The first tin strike was at Elsmore in 1871 and intermittent development of this area, centred on Tingha, reached its peak in 1882. This pattern was followed in the Emmaville district in the 1870s with broken, but often

intense activity. Tin was mined at the Ottery mine (Heritage Item ID3911620, Appendix 2) near Emmaville between 1882 until 1905, when the mine closed down, to be re-opened in 1920 for the production of arsenic. After 1880 both areas followed a declining course and were almost finished by 1890 (Premiers Department 1951:8).

The effect of the tin discoveries stimulated the economy like the gold boom of the 1850s, but this time it was less marked. Inverell and Glen Innes, the towns nearest the fields, boomed as their population increased and industry and commerce flourished. Armidale, on the main line of communication with the south prospered by the great increase in through traffic. The general boom was heightened in the early 1880s by the arrival of the railway line. But as the tin mines declined recession and depression set in. By 1887 Glen Innes was suffering from unemployment and Armidale was depressed.

After the introduction of dredging at Emmaville and Tingha in 1902 tin mining was re-established to the level it was in the 1870s. For a time the value of the output was around £200,000 per annum. After this it dropped, but experienced a revival in the depression. By 1950 tin was still an important industry in the region.

8.6 MINING FOR OTHER RESOURCES

Mining in the UNE/LNE took place for other resources, such as copper and gemstones, but it did not have the impact that gold, coal, and tin had on the economy and the landscape of the forests. Two arsenic mines at Mole Creek (Heritage Item ID 3911628, Appendix 2) and Tent Hill, near Emmaville (the Ottery mine), flourished in the early 20th century, but were closed down in the 1950s due to the toxicity of the arsenic.

* * * * *

Mining has played an important role in the history of the UNE/LNE area, shaping the landscape, its settlements and roads. Gold mining represented a second phase of extraction after cedar, the ‘red gold’, and was on occasion, as at Copeland, found by cedar getters. Settlements flourished while the mines produced, but then often withered and died, leaving small remnant communities in the steep, forested terrain.

9. UTILISING FOREST RESOURCES

THEMES: NSW HO 9 Environment

AHC HT.03.03.04 Utilising forest resources

HT.03.03.04.01 Extracting forest resources

HT.03.03.04.02 Processing forest resources

HT.03.03.04.03 Transporting forest resources

9.1 INTRODUCTION

The practice of extracting, processing, and transporting timber from the forests to the markets is not easily able to be separated under three discrete headings. The AHC theme 'Utilising Forest Resources' is divided up that way, and this is the way we have organized this chapter. Yet the three processes are clearly intertwined. Bullocks were used to snig the timber to the logging dumps where it was loaded onto bullock wagons, by bullocks, and taken to the mills. In some cases bullocks were also used to take the sawn timber through the surf where it could be loaded onto ships. Sawmills were built inside the forest, on the edge, or away from the forest in the towns, and next to jetties by the shore for easy loading onto cargo boats. In the case of cedar in the dense rainforests, and in the convict establishments, all the processes - cutting, hauling, and sawing into logs, were done by the same people, by hand.

9.2 EXTRACTING FOREST RESOURCES

It is generally overlooked that the timber industry has made a great contribution to the wealth and progress of New South Wales from the very beginning of settlement. It has provided the materials for the building of wharves, houses, bridges, boats, warehouses and factories, fences, stockyards, wheeled vehicles, sleepers for railways, props for coal mines, wood for furniture, firewood, crates, and a host of other useful things.

It has provided employment for many people, especially in country areas, and especially when other work was scarce.

Timber quickly became a staple export; the cedar was prized overseas as well as in Australia, and when that grew scarce, other woods, especially the hardwoods of the North Coast, became sought after, used for wharf piles and decking, for shipbuilding, and buildings. At Brisbane Water until the 1870s and 1880s shingles cut from ironbark trees were in demand for roofing the Sydney buildings, and until galvanised iron roofing was adopted it was used everywhere. Wooden paving blocks, also cut from ironbark timbers, were universally used as the base material for city streets.

Sawmilling was an integral part of the process of timber-getting, cutting, and sawing, shaping the product for market. Sawmills were set up near the timber forests, and as the search for timber widened, they were established on the outskirts of towns, to which they brought prosperity and jobs. In 1910 Forestry commenced licensing sawmills: 420 mills were licensed, and a large proportion were in the northern half of the state. Some sawmills specialised in cutting Crown timber, and some had specific Crown areas.

Grant, in his account of the history of forestry in NSW (1988:219-227), has a number of interesting tables related to various periods. Starting at 1855 at 12 mills, the number rapidly rose to 334 in 1882, and was fairly steady until 1908, when 4127 hands were employed. Peak years followed WWI in 1919 and 1920 (622 and 645) with numbers keeping steady until the depression of the 1930s. After WWII numbers started to decline from 487

in 1945 to 242 in 1965 and 121 in 1988. Part of the decline in numbers is attributed to the amalgamation of mills, and their tendency to concentrate in country towns. Many old sawmill villages faded away, but bush workers continued to live at these old sawmill village sites for a time, even when many of the timber houses were abandoned or demolished. (Grant 1988:219).

An interesting trend is that private forests have increased in number after the war, with mills drawing three quarters of their timber from these in 1988.

Exotic pine production has now eclipsed any other wood product in the state. The importation of softwoods from overseas has been a continuing problem over many decades now. There were experimental plantings as far back as 1894 at now Strickland State Forest (Heritage Item ID 3913033, Appendix 3), near Gosford. The first commercial planting was carried out at Tuncurry in 1913. The planting of these forests has not been entirely welcomed on aesthetic or patriotic grounds, but they have contributed to the control of logging in other areas.

These forests have been assessed for growth rates, necessary thinning and utilisation. House building in Australia, which is regularly cited as an indicator of national economic growth, relies on an adequate supply of softwoods. There has been traditional demand for 'oregon' timber from America and elsewhere, and it was common for architects to stipulate 'oregon' for use in their buildings. 'Pacific Maple' became an alternative wood after World War II, a general term denoting softwoods from Asian and Pacific Rim forests which are being harvested at an alarming rate.

A reversal of the usual trend is now taking place: farmland is being used for plantings of both exotic softwoods and native timber species for harvesting. Exotic pine production has now eclipsed any other wood product in the state of New South Wales.

Hardwood, Brushwood and Hoop Pine are still harvested from Crown Forests. Sleeper-cutting was a large part of the timber industry, with sleepers hewn by hand in the forest by specialist workers who usually worked singly or in pairs. In 1948 the Railway Department installed a portable sleeper mill in Tanban SF near Kempsey, one of five operated in this period, three near Kempsey, and two at Wauchope. Ironbark was widely used for this, then tallowwood, grey box, grey gum, blackbutt, and white mahogany.

Poles for telegraph and electricity lines have been an ubiquitous sight in NSW towns and roads for a long time. Poles are treated by pressure impregnation of creosote, extending their life. Wooden piles have been used for wharves and bridges, ironbark and turpentine being favoured as being the most durable. Timber girders were used in buildings, even though steel has come into use now. Significant quantities of timber mining props are used in NSW mines, the small round timber being cut from regrowth stands.

Though the use of firewood has declined in the last few decades, wood chips have been more widely utilised in hardboard, particleboard, fibreboard and plywood manufacturing. Paper products too, are dependant on wood pulp supplies.

Apart from these uses, forest trees were processed for wattle bark, traditionally, but that has declined recently with the increased use of chrome salts. Eucalytpus Oil is made from the leaves of some species for medicinal, industrial, and perfumery purposes. Blue Mallee leaves are harvested for this in West Wyalong. Tea Tree Oil has been extracted commercially from *Melaleuca alternifolia* grown only in damp and swampy situations from Stroud to the Richmond River. Drug extracts are also utilised.

Sawmills are recognised by State Forests as an essential part of their operations. Getting the timber to the mills engendered another important country industry, the bullock teams, the horse teams in some cases, and then the timber tramways, and now the tractors and bulldozers.

Not least, was the shipping industry along the rivers of the North Coast, the 'droghers', flat bottomed steam boats, which transported the timber from wharf-heads near the forests, to the larger town centres, and from there to the bigger ships which could make the voyage to Sydney.

9.3 PROCESSING FOREST RESOURCES

9.3.1 New England

In the New England Region, there were 69 State Forests and 26 Timber Reserves in 1951, that is 8.8 % of the State Forests. They were mainly located in the belt of hilly to rugged country along the east of the Tablelands. There were 81 sawmills, about 30 being in the towns, especially Urbenville, Acacia Creek, and Kunderang east between Jeogla and the Macleay River. Armidale and Uralla both had four mills, and Glen Innes and Tenterfield had three. Most of the timber cut there is exported to the Sydney market, but some is used locally, for case making, plywood, and railway sleepers. In 1951 people directly employed in timber-getting numbered 145, and another 469 people worked in sawmills and firewood mills in the

district. The timber used is certainly more than the annual growth in these forests (Premier's Department 1951:55-55).

9.3.2 Northern Rivers

There had been no sawmills in the Northern Rivers until the 1850s as cedar was sawn by hand in primitive saw-pits and shipped to the Sydney market. Powered by steam, one of the first of the mills came to be built near Grafton by William Kircher, who brought out a large number of German immigrants under a bounty system to work in his factory in the 1850s. Many of them bought land in Grafton near the racecourse for small scale farming and horticulture.

The first large sawmill on the Richmond was established by the Breckenridge Bros at Wyrallah in 1865. WT. Yeager built Oakland Mill, with its large wharf at Yeagerton, and built houses for the mill workers there. William Yabsley had previously built his sawmill and ship yards at Coraki, a huge building which dominated the town in the 1860s. It was converted to a sawmill in 1880.

The first wooden vessels were built at Woodburn in 1847, and ship yards were established by the Bellinger River by Richard Darbyshire, and on the Clarence William and Edward Chowne built a 240 ton vessel in the same year. They built small vessels suited to the river trade; there was almost a boom in shipbuilding by the 1870s, before the steel hulled steamships displaced them in the 1880s.

9.3.3 Queensland and the Northern Railway

In 1859 the northern boundary of New South Wales was marked out when Queensland was proclaimed a separate colony. Though Brisbane was much closer than Sydney, Sydney continued to be the destination for the timber and other agricultural products. The railway too, was built along the New England route first (eg the Border Loop Railway, Heritage Item ID 3911985, Appendix 2), and the coastal areas were linked only between Byron Bay and Murwillumbah in 1894, and between Casino and Grafton by 1905, with the whole line from Newcastle to Coffs Harbour proceeding in the 1920s; it crossed the Clarence River in 1932, and finally joined the line from Kyogle to Brisbane. Once the bridges were built and the railway was pushed through, the isolation of the North Coast was less marked, and the area began to attract tourists and retired people as residents especially from the northern inland of the state.

9.3.4 Sawmills after 1910

Terry Kass, in his Regional History of the North Coast, observed that:

> Sawmills were the most visible feature of timber getting, apart from the actual effects on the forest itself. Yet the mills could be as ephemeral as the forests which were their resource. Many were small and highly mobile, stopping at a site for a few years while the nearby timber went under their saws, before moving on again (Kass 1989:25).

In the Gloucester district in 1934 after the area was cut out F.J. Carson moved his mill from Yarramolong to the Berrico forests. The area, about 30 km from Gloucester became known as Carsonville. The people lived in hessian houses and when the new mill started up a school, dance hall, shop/PO, tennis court and cricket pitch were built. After nine years the mill moved to the northern end of the town of Gloucester (Houghton 1997:File 2). This site would now be a deserted village to be recorded, but its location is not known.

Many larger mills located near towns have also disappeared after they acted as a catalyst for growth for their villages or towns, building houses, stores, and other facilities. Some were destroyed by bush fires. Sometimes the only trace is found in the heaps of sawdust produced by the mills and left in huge piles, as no further use could be found for them.

Mill cottages were sometimes built on skids to facilitate relocation. Sleeper-cutters used roughly assembled bark humpies or tents. Forestry Commission workers were issued with eight by ten foot cottage-type tents. They cooked their meals at large galvanised iron galleys. Forestry overnight huts, fire huts, and fire lookout towers were built. The Commission erected camps for 10 to 30 men, often using ex-army huts, e.g. Rummery Park Forestry Camp (Heritage Item ID 3911842, Appendix 2) in Whian Whian State Forest. A forester's camp of two huts and other buildings remains in Candole State Forest and a Fire Hut originally with a phone line to Pine Brush HQ.

9.4 TRANSPORTING FOREST RESOURCES

9.4.1 By People

In the convict settlements in early Sydney, Newcastle, and Port Macquarie, men did all the work by hand. They cut down the trees by axe and crosscut saw, sawed the logs in pitsaws, and hauled the logs along the ground or carried them on their shoulders 'centipede' style. At Port Arthur in Tasmania there was a deliberate policy of not having any oxen on the peninsula. The convicts were the beasts of burden. At the NSW establishments there were simply few animals available for this work.

Also, in the dense rainforests of the coastal rivers it was not possible to cut tracks through the brush for bullock or horse teams, so the logs had to be hauled by hand to the creeks, where they could be floated down to collection points and then loaded onto sailing boats, or tied into bundles and rafted down to the river mouth for transport in larger ships to Sydney.

9.4.2 Bullock and Horse Teams

Bullock teams were much more common in the forests than horse teams, though sometimes the latter were used. In the Woolgoolga area bullock teams hauled the logs out of the forest, while horse teams were mostly used to transport the milled timber to the Woolgoolga jetty (Yeates 1982:150).

At Woolgoolga bullocks were used to carry the softwood logs of cedar and pine which would float, onto the beach and out into the surf as far as they could go. The logs were then floated and winched on to ships anchored in the bay (Yeates 1982:17).

The bullocks needed tracks to be cut for them walk on, and the timber getters had this work to do as well as cut logs. By 1892 all through the Dorrigo plateau the men had cut miles and miles of tracks for the bullock teams (Curby 1997:91). Cut Rock Bullock Track (Heritage Item ID 3904091, Appendix 3) in Olney State Forest has been cut deep into the sandstone bedrock to enable bullocks to negotiate the steep slopes above Cooranbong. Bullock power was used in the forests until they were superseded after World War II.

The bullocks needed plenty of grass for feed and water to drink. In the Grafton district up until the 1930s all logging was carried out by bullock teams. They snug (hauled) the logs along the creeks and then by wagon along tracks to the mills. Because the bullocks required grass and water most of the early tracks followed the creeks. Trees next to the creeks were ringbarked so that they would die, let the light in, and promote grass (Williams 1992:1).

In the Dorrigo area bullocks were used long after they were superseded elsewhere for selective logging of cedar and hoop pine, as the country was so inaccessible (Curby 1997:99). Bullocks were also used in clearing forests for settlement. They pulled on chains which felled all the trees and they were also used to grub out stumps.

Bullock and horse teams were so extensively used that the farmers around Woolgoolga found that their paddocks yielded better returns by leasing them to teamsters for grass, than growing crops. Employment was high, and the teamsters could afford the high rents to graze their working horses and bullocks (Yeates 1982:119). In the 1930s-40s bullocks were gradually replaced by engine power. Tractors were used to winch the logs, and trucks to take them out of the forest to the mills. Bulldozers are extensively used now also.

9.4.3 Logging Tramways

It appears that logging tramways were not so widely used in NSW as they were in the Victorian Mountain Ash forests, but in the 1920s and 30s sawmillers in the Northern State Forests and Crown Lands built a small number, for example Long Creek (Heritage Item ID 3911984, Appendix 2), Wootton Logging Railway (Heritage Item ID 391312, Appendix 3) and the Dorrigo to Glenreagh Railway (Heritage Item ID 3911784, Appendix 3). The Forestry Department was authorised to issue occupation permits for tramways, and a number were in place before 1900, and they increased slightly in the following decades (See table from Grant 1988: 298).

Some of the tramways were constructed long distances on the forests. At Woolgoolga and Coff's Harbour the construction of jetties and logging tramways encouraged the export of hardwoods and removed the dependence on maintaining pastures for the bullocks

which used to take the timber from the logging sites to the mills (Pearson 1994).

Sawmillers built and operated them at their own cost to bring logs to their mills. They were gradually replaced by Forestry constructed roads suitable for log transportation by petrol or diesel powered motor lorries, with a timber jinker in tow. One of the last tramways operated in NSW was the Munro & Lever Pty Ltd tramway in Roseberry State Forest north of Kyogle used until 1947. One of the most spectacular was Longworth's at Laurieton built in 1917, with its strongly built bridges over gullies and rough terrain (Grant 1988:295). The tramways had either 100 mm square sawn wooden rails usually of brush box or light steel rails placed on sleepers. The log trucks were mostly hauled on the tramways by horses in the early days, but some used light steam locomotives. The British Australian Timber Co at Wedding Bells SF 360 had three sections, one with a counter-weight offsetting horses, and one with a steam locomotive. An incline tramway was used in the Never Never SF east of Dorrigo before 1908, and continued until 1931 (Grant 1988: 296).

Many logging tramways are known in the State Forests, and have been listed in the Data Audit. Some of the responses to Jen Houghton's archival resources questionnaire by the District Foresters in 1997 point out that there are many more tramways in the forests, both in the Wauchope and Dorrigo districts. P.K. Roberts in Dorrigo states that there are logging tramways in Wild Cattle Creek SF, yet there are none listed for that Forest in the Data Audit (Houghton 1997:Files 2 & 3).

9.5 POST-WORLD WAR II FORESTS

After WWII there was a substantial demand for timber but a lack of up-to-date machinery and equipment. Mechanisation meant that the bullock teams were replaced by tractors and bulldozers, and in the timber mills, one-man operated chain saws resulted in increased productivity. But, despite the improvements, the sawmilling industry suffered a serious crisis. Credit restrictions caused a slump in the building industry, and imported timbers, notably oregon from America, were helped by the removal of import duties. As early as 1951, there was cause for alarm at the inability of native forests to support the current usage of timber. The forest resource, belatedly, was recognised as finite.

In the 1960s then, 'sustained yield' was the forest management policy. The traditional areas of supply and quotas in the Grafton area were suspended. Forest yields there in 1964/65 were the lowest on record. In NSW overall, timber yield fell badly. Sawmills were forced to close or amalgamate and transfer to the larger towns.

Before time, silvicultural and conservation practices had been only intermittently effective, because they were of lesser priority than maintaining the yield. The 'creaming' of the big hardwoods ceased in the Murwillumbah Management Area in 1960, and a tree marking system was adopted to improve and intensify forest regeneration. Experimental hardwood regeneration schemes in Whian Whian and Mebbin State Forests emerged as more important.

The post-war boom, combined with the improvement of rural roads, had made the North Coast and other forests more accessible to city-based tourists. 'Bush tourism' became popular; more people gained access to a wider variety of environmental experiences, and previously inaccessible forests were within reach. This development had far-reaching implications for the Forestry Commission. This development is again raised in the chapter on Conservation.

10. TOWNSHIPS

THEMES: NSW HO 10 Townships

NSW HO 13 Transport

AHC HT.03.07 Moving goods and people

10.1 INTRODUCTION

As Terry Kass (1989) has pointed out in his Regional History of the North Coast, this region is in reality made up of a series of river valleys, rather than being a single entity. There is no dominant, cohesive centre or city to tie it together, the focus is split between four or five largish towns, each vying with each other to attract government funds and population. In the 19th century, Grafton was planned as the largest centre, and had the lead over the other newly founded towns when the timber trade was at its height, but now Coffs Harbour and the coastal resorts seem to be on the ascendant.

It is, however, interesting to trace how the towns have waxed and waned as their districts were settled, and developed, as industries linked to the primary products were established, and how changes of emphasis upset the former tentative balance. The initial planning of the towns is also covered in the chapter on Land Tenure.

10.2 EXPANSION OUT FROM SYDNEY

The site of Sydney, the state capital and dominant city, was hedged in with a massive mountain range on the north and west, difficult to cross, with sparse water sources, dangerous in summer with frequent fires. Then, in 1804, Newcastle was settled from the sea as a convict station.

Newcastle became a centre for the cedar-cutters, and its dealers and shippers, almost from the beginning. Supplies of cedar were abundant near the Hunter and its tributaries. Gosford, The Entrance, Budgewoi on the way north were also attracting the cedar-cutters, with little vessels taking the forest produce to Sydney. Other woods were also harvested to supply fuel, fencing, shingles, and a variety of products.

The Hunter River was the only port north from Sydney with a river entrance that was possible to sail into with relative safety, and even that had its problems. Further north, all along the North Coast to Moreton Bay, the country was difficult to penetrate as the river mouths without exception were guarded by treacherous sand-bars.

Expansion pushed out from Newcastle, along the Williams River, to Paterson, Clarencetown, to Dungog, Stroud and Gloucester. These were cedar-cutters' headquarters, and then became ship-builders' towns. Land was granted to small farmers, emancipists, some of whom saw their sites first as cedar getters, and later to free settlers, in the twenties. The Hunter Valley was mainly a small-man's valley, with land parcels usually from 40 acres to 120 acres, though further from the River, larger properties were granted to public servants, the military, and people with capital to invest on their land.

10.3 EXPANSION THROUGH THE HUNTER VALLEY TO NEW ENGLAND

Along the Hunter River, Maitland was officially founded in 1832, and Morpeth, downstream, became its port. The forests of the Barrington area were accessible from there. Maitland became the largest centre, with its population encouraged by the laying out of East Maitland to supplement the earlier West Maitland. Local enterprise established a variety of trades and manufactures. It eclipsed Newcastle. From there, the settlers pushed north-west along the Hunter Valley. Singleton, Muswellbrook, Scone, and Murrurundi were stopping

places on the way north to the Liverpool Plains and the New England Tablelands.

Over the Liverpool Range, Tamworth, as the site of the head station of the Australian Agricultural Co, and with its position at the gateway to the tablelands on the one hand, and the Liverpool Plains on the other, grew steadily during the forties. Further north, the squatters were attracted by the grasslands of the Tablelands, and established centres at Walcha, Armidale and Guyra. Later, gold was discovered around Uralla, Armidale, Nundle, Hillgrove and around Glen Innes. Scone in the Hunter Valley also benefited from a gold strike.

The lines of communication from Sydney were stretching further outwards, with Sydney as their only market for goods and still the major depot port for the region. There was a need to establish a better route from the tablelands through to the coast, but at first, this was fraught with difficulties. By 1844, the centres north of the Hawkesbury were fanning out from Newcastle along the Hunter River, with a few like St Albans, Wollombi, and Lake Macquarie along the way. The main route was by sea, but the small boats, by now built in the colony, often had difficult and stormy passages.

DISTRICT COUNCIL FIGURES 1844

The following figures show the District Council Statistics in 1844:

District	People	Centre	People
Maitland-Merton	5,992	Maitland	2,768
Muswellbrook	1,052	Muswellbrook	215
Patrick's Plains	2,659		
Scone-Murrurundi	1,150	Scone	63
Port Macquarie	2,409	Port Macquarie	1,053
Paterson	2,746	Paterson	90
Raymond Terrace-Dungog	1,918	Raymond Terrace	364
Wollombi-Macdonald	1,155		
Brisbane Water	1,090	Gosford	199
Cassilis	636		
Newcastle	1,996	Newcastle	1,377

By 1861, the District Councils were replaced by general permissive Incorporations for towns, and the picture was starting to fill out.

Township	Population
Maitland	7,528
Newcastle	1,462
Armidale	901
Dungog	458
Paterson	241
Raymond Terrace	535
Post Macquarie	984

Towns gazetted became more numerous during the 1860s, and the Northern Rivers centres of Grafton and Port Macquarie began to grow, and Armidale assumed its dominant presence on the tablelands.

Township	Population
Newcastle	2,400
Grafton	1,000
Brisbane	5,000
Congegong	1,000
East Maitland	2,200
West Maitland	5,771
Armidale	950
Morpeth	1,159
Singleton	1,000

Later on, in the 1890s, the balance between the towns was a little different. Newcastle was starting to assert its dominance over its river valley, a dominance re-enforced by expensive harbour works. Tamworth, at the foot of New England, was outstripping Armidale.

	Town	District
Newcastle	12,900	50,000
Maitland	7,300	
East Maitland	2,920	
Morpeth	1,200	5,340
Singleton	2,000	7,022
Tamworth	4,600	
Armidale	3,820	
Glen Innes	3,000	

(Figures are drawn from Larcombe 1973 and from The Australian Handbook 1892)

10.4 PORT MACQUARIE, WAUCHOPE, KEMPSEY

Port Macquarie was a ready-made town when the convict station was closed in 1829, the town was marked out with a new plan, and the free settlers were encouraged to settle there. The buildings already built were utilised or used as quarries, some industries were established: cedar getting, a little grazing, fishing.

John Oxley and his party in 1818 had ridden eastwards to the coast, after coming from the Macquarie River, across the Liverpool Plains, climbing the Dividing Range, passing by the site of Walcha, and struggling down the steep mountain passes to the Hasting River. The seawards route was not explored until a few years later, when Oxley sailed up the coast to the Brisbane River. He recommended Port Macquarie, as he named it, for a site for convict secondary punishment, thus freeing up Newcastle and the Hunter Valley for free settlers.

Settlers from the Hastings River arrived overland to the Macleay by 1836. Enoch Rudder took up a large portion of land on the South bank of the Macleay, grazing sheep and marking out the town of South Kempsey tentatively. Another notable early settler in the valley was architect John Verge, who forsook his profession to become a grazier, selecting 2,560 acres on the Macleay, calling it 'Austral Eden'. No Verge buildings, however, have been identified in the area yet.

10.5 GRAFTON

Grafton was located at the head of river navigation on the Clarence. As early as 1839 bullock teams were gathering at South Grafton near Wilson's Hill, and a store was established and ship-building commencing. By 1859 Grafton was incorporated as a municipality. It was planned as a large town, the centre of the district by Surveyor W.W.Darke, who had been involved in the prior survey of Melbourne. He marked out the town on a grid base, and included two extra wide streets of 132 ft. W.A.B. Greaves did the detailed marking out of the streets and the allotments. (Campbell, 1922, 304)

At the present time, at Grafton, after the development of 150 years, there is still, in the middle of the city, a small island, Susan Island, which supports a remnant rainforest and a notable bat colony, the only surviving one between the bats of the forests to the south and those far away to the north. It is an historic colony which continues a tradition of a bat maternity camp and of bat-derived pollination of rainforest (Lunney and Moon 1997:247-277). A contemporary account of the forest there by the naturalist James Wilcox in 1870 provides a useful starting point for considering changes in the environment (*Clarence & Richmond Examiner* 19/4/1870). It is the only detailed and authoritative record of the early flora and fauna of a rainforest remnant (Lunney and Moon 1997:256).

Susan Island can be called a 'historic site' as it demonstrates several of the ICOMOS criteria, even if it has been degraded, for it gives us a picture of degradation, a glimpse of partial recovery, and its historic and continuing use as a natural system is important. It covers 16 hectares of the island; it became a Nature Reserve in 1982, and is administered by the Susan Island Trust.

10.6 CASINO, LISMORE AND THE TOWNS OF THE BIG SCRUB

Surveyor Peppercorne laid out Casino, Lismore, Codington, and Deptford at the heads.

Rural land near the Clarence was sold slowly at first. Scottish farmers were interested, as were the tenant farmers coming north from the Hunter and Williams Rivers. After the Free Selection Acts of 1861, many farms were taken up in this decade. Land mania set in at

the Big Scrub, 40 to 640 acre farms were available, and small scale speculation in land was a local excitement.

The town of Lawrence became the main river port for trans-shipping wool and meat from New England. Lismore was planned in 1855 by Surveyor Frederick Peppercorne (see map); Casino was also planned in 1855, as a headquarters for the squatting interests. Casino had more people in 1871, 284; Lismore only 93. But ten years later Lismore had more small farmers around it, and the population reached 992, to Casino's 602.

The urban pattern of the North Coast towns depended on the size and extent of the farms surrounding each town, and on its capacity to generate goods and services for its district. Contact between valleys was difficult, but the town's capacity to trade within the districts and further afield with the Sydney markets was important. North Coast ships took the local products, headed by timber, to Sydney, all through the 19th century. The main regional towns were located at the head of navigation of each of the rivers, the Clarence, Richmond and Tweed. Along these rivers, however, a series of smaller ports linked to maize or sugar-growing as well as timber-getting, was emerging. On the Tweed, the larger holdings were more characteristic. Ports located near the river mouths grew to become major centres, e.g. Ballina and Maclean, with Yamba and Iluka growing on the ocean front.

In the Big Scrub near Lismore and Casino, a network of small towns and villages was created, though most faded during the 20th century, leaving the dominant ones linked by the main east-west road: Alstonville, Ballina, and Coraki on the way to Evans Head.

The major towns, as they gradually assembled in the 19th century, were in 1892:

Port Macquarie (town population 1500, district 4,000)
Kempsey (town about 2000)
Grafton (town electoral roll, 2,640, district 18,184)
Lismore (town about 6,000, elec roll for district 7,150)
Casino (town about 1,500, district 4,000)
Ballina (town and vicinity 2,000)
Murwillumbah (district 1,600)

(Figures from Australian Handbook, 1892)

There was optimism in the air. In 1888, that great year for wild predictions, it was said that Grafton and its cluster of Clarence River towns between it and the sea held great promise for the future: Lawrence, Yamba, Ulmarra, Iluka, Brushgrove, Harwood Island, Chatsworth, Copmanhurst, and Palmer Island. 'The capabilities of this district are beyond estimate, a million families could find homes along this stream and its tributaries' (Morrison 1888:512).

10.7 RIVER WORKS

The river-mouth ports had some attention after 1900 by the State Government after long years of neglect. Improvement of the profile of each port was undertaken: dredging, constructing channels, building breakwaters, building wharves. Lenore Coltheart (1997) has detailed these harbour works along the North Coast. They came, in a way, too late. The busy period was over, the products of the districts were having difficulty in their marketing and sales. Sugar was in decline, maize was in decline, butter and milk had to compete with products from other states, and from overseas. Timber, the first prized, and long harvested product, was at last perceived to be a finite, non-renewable resource, now more difficult to bring to market.

However, in the early 20th century, the engineering works at the river mouths were a significant change from the former neglect by the NSW Public Works. Work on the deep channel at the Tweed began in 1896, and the breakwaters were built after 1900. A battery of dredges were busy there for ten years. The entrance to the Richmond then received some attention. Dynamiting the shoals was followed by dredging. Quarrying for the breakwater changed the configuration of the town of Ballina, splitting it into three parts.

Extensive shoals were still troublesome in the 1890s, covering the shapeless entrance to the Clarence River from Yamba on the south to Iluka on the northern shore. Dynamiting and dredging were a start, and wharfage along the river was built by Public Works at Lawrence and Maclean. The Green Point quarry was worked out by 1899 for channels and breakwaters, and then a new quarry was commenced on Woodford Island seven miles upstream. It was a prodigious work. Yamba's popularity increased for local holiday making.

Byron Bay had a strong lobby in Sydney, and a long jetty was constructed with a narrow gauge railway laid in 1899. Woolgoolga also had an open ocean jetty, and both were prone to damage from storms.

At Nambucca and Ballina the rivers were reorganised from 1901. Villages of workers houses clustered around Works headquarters, small ships and droghers plied the river and its tributaries, ships were built for river traffic.

> This was the heyday of the river boats, as exciting a sight as they steamed up river as ships sailing into Sydney Harbour had been early in the century. They brought contact with the outside world, delivering mail, goods ordered by catalogues from Sydney stores, and visitors, as well as supplies and equipment for local shops, factories, and farmers, They were the lifeline of the valley communities. There was romance and pleasure in a voyage to Kempsey to visit or shop, the river 'alive with steamers and gaily decked boats full of passengers singing as the boat steamed upriver', calling at wharves laden with cargo. All this flagged a culture now at its height along these rivers (Coltheart 1997:79).

These Edwardian days were not to come again. There were problems looming, faster than anyone realised. The huge cost of the river works and Newcastle harbour works was abruptly cut by the war. The optimism vanished in the depression years, the northern rivers produce was struggling for markets. Only timber was still wanted.

10.8 ROAD AND RAIL LINKS

The predictions of the 1880s were over-optimistic of course. But with the firmer establishment of road links from the south and north, and then at last railway links, the Northern Rivers gained contact with Newcastle and Sydney. Brisbane and Ipswich too, became important outlets for their goods.

Routes from New England were still difficult, only three major and one minor route from Tenterfield to Casino, from Glen Innes to Grafton, from Armidale to Dorrigo and Coffs Harbour, from Walcha to Port Macquarie have been established. They all were forged between forested areas, and all contributed to linkages between forests, towns, and their markets.

After 1909 and 1916, the NSW Forestry Commission gradually took control of the management of the forests, both on the North Coast and in the Northern Tablelands. The presence of foresters in the towns became more marked as concern grew for the fate of these areas. The forests which had been the magnet for settlement in the valleys and towns, the backbone of their economies, and the means of augmenting an uncertain agricultural production, seemed to have been heavily logged near the towns. It would be some time before timber production could be organised to show a sustainable yield.

But the climate, responsible for the growth of original forest cover, started to attract people as well as trees. Temperate, equable in winter, it was suitable for people retiring from the capitals and the inland towns. Tourism grew as a local industry, and resort towns like Coffs Harbour flourished again.

TOWN POPULATIONS - 1961 CENSUS

Centre	People	Centre	People
Newcastle	208,641	Tamworth	18,984
Maitland	21,331	Taree	10,050
Armidale	12,877	Kempsey	7,489
Glen Innes	5,842	Murwillumbah	6,748
Grafton	15,538	Coffs Harbour	6,614
Lismore	17,376	Ballina	4,129
Casino	8,091	Coraki	970
Port Macquarie	5,931		

10.9 URBAN CENTRES, LOCALITIES - 1996 CENSUS

Since the sixties, the Central Coast has emerged as the third biggest population locality in the State after Sydney and Newcastle. This is mainly due to the spill-over from metropolitan Sydney as rail links were electrified to connect with the capital city grid, and freeways gave quicker access to the city.

At a lower level, the Tweed Heads district at the far north of the state is growing alongside the Queensland Gold Coast out from Brisbane.

The population figures are grouped below in two sections:

1. Central Coast, Newcastle, Hunter Valley and New England.

2. Port Stephens, Port Macquarie, Lismore, Coffs Harbour and then up to the Queensland border.

Source: 1996 Census of Population and Housing, NSW.

Centre	People	Centre	People
Central Coast	227,657	Tweed Heads	37,775
Port Macquarie	33,709	Lismore	28,380
Newcastle	270,324	Coffs Harbour	22,177
Maitland	50,108	Taree	16,702
Tamworth	31,865	Grafton	16,562
Armidale	21,330	Ballina	16,056
Cessnock-Bellbird	17,540	Forster-Tuncurry	15,943
Kurri-Kurri-Weston	12,559	Sawtell	13,240
Singleton	12,519	Casino	9,990
Raymond Terrace	12,332	Kempsey	8,630
Muswellbrook	10,541	Murwillumbah	7,657
Glen Innes	6,101	Nelson Bay	7,001
Scone	3,468	Nambucca Heads	6,257
Branxton-Greta	3,377	Byron Bay	6,130
Tenterfield	3,205	Camden Haven	5,823
Lake Munmorah	2,623	Lemon Tree Passage	5,316
Lennox Head	4,511	Alstonville	4,725
Quirindi	2,671	Lennox Head	4,511
Uralla	2,460	Yamba	4,721
Dungog	2,181	Wauchope	4,693
Guyra	1,801	Wingham	4,446

Cutting off the figures at about 2,000 for the Hunter and Tablelands, and at 4,000 for the Upper and Lower North Coast, we can see a great change of emphasis in the rise of the coastal towns compared with those of the Tablelands. Smaller Urban Centres also declined both on the Tablelands and on the North Coast.

It can be seen that the resort towns, particularly on the Central Coast and on the far North Coast are growing more strongly and consistently than any of the inland towns, with the possible exception of Tamworth.

Centre Hunter Valley & Tablelands	People	Centre Coastal Strip	People
Uralla	2,460	Woolgoolga	3,772
Aberdeen	1,737	South West Rocks	3,514
Walcha	1,604	Maclean	3,157
Denman	1,507	Mullumbimby	2,870
Werris Creek	1,484	Kyogle	2,866
Wyee	1,402	Urunga	2,716
Dorrigo	1,013	Bellinger	2,690
		Old Bar	2,650

Gloucester, Evans Head, Iluka, Brunswick Heads, Coraki, Crescent Head, and Bulahdelah, though still small, from two thousand to one thousand people, are outstripping the small inland towns. These figures underline the big shift to the coast and near-metropolitan areas.

Some small towns and villages mentioned before, like Coraki, Lawrence, Ulmarra, Iluka, Brushgrove, Harwood Island, Chatsworth, Copmanhurst, Coddington, Depford, and Palmer Island, have remained very small indeed. Some, indeed can not be found now in the Census list.

And where are the forests in all this? Are they used for timber, for recreation, or for decoration? rarely visited, and seen as a backdrop only? Every year the peripheral forest fires threaten more houses, as houses are built closer and closer to the forests. This dilemma remains unresolved in the nineties.

11. INTENSIFICATION OF SETTLEMENT

THEMES: NSW HO 4 Pastoralism

5 Agriculture

AHC HT.02 Peopling the continent

AHC HT.03 Developing local, regional and national economies

AHC HT.03.03.03 Utilising mineral resources

AHC HT.03.04 Engaging in primary production

AHC HT.03.07 Moving goods and People

11.1 INTRODUCTION

By 1825 the alluvial soils along the Hunter River near Maitland were taken up by about 300 white settlers. (Maitland and District Historical Society 1983:13). Further north as Port Macquarie was established as a convict station in the 1820s remote from Sydney, the convicts were used to exploit the fine stands of cedar on the Hastings and Manning Rivers. These were shipped to Sydney for use in the buildings there, and also sent to England, starting a trade which was a welcome return for goods sent out to Australia.

Occupation of the North Coast proceeded inexorably from this time. Settlers arrived from Port Macquarie and the Hunter to the Manning River when the limits of location were extended to include this valley. South Kempsey was established by Enoch Rudder with a pastoral station by 1835 on the Macleay a few years later. The squatters, largely from New England, occupied the upper reaches of the valleys, and at the same time, cedar-getters combed the brushes for cedar.

The first cedar camp was on the Clarence by 1837 on Woodford Island. The cedar-getters reached the Richmond in 1842, and felling began on the Nambucca and Belligen Rivers also. They travelled north to the Tweed in the middle forties. Dorrigo on the escarpment was not established until 1857; and the Comboyne Plateau southwest of Port Macquarie in the 1890s. Grafton attracted a meatworks nearby at Ramornie in 1862, another was built at Lawrence (Kass 1989:7-13).

11.2 GOLD IN THE UPPER REACHES OF THE RIVERS

The discovery of gold at the upper Clarence near Koreelah Station and at Cloud's End was a local cause of more intensive development for the district. Rev W.B. Clarke made a survey of the Clarence, Richmond and Tweed watersheds in 1853, and noted that the Timbarra River had fine gunpowder gold, and that the Boyd and Martin Rivers held good prospects for gold (Daley 1956: 60).

Miners appeared almost overnight at Pretty Gully near Tooloom near the border, Emu Creek, Nymboida in Dalmorton, 60 kilometres from Grafton, and other miners worked at Fairfield or Drake on Hewitt's Track, and along the Timbarra. Unsuccessful diggers from other parts of NSW arrived looking for gold, and Grafton became the centre for exporting gold to the Sydney Mint. A Diggers Employment Committee was formed by the government. and sponsored unemployed miners going to the Clarence reimbursing shipping companies and storekeepers for their rations. Grafton's population rose from 300 in 1831, to about 1,400 in 1859 (Daley 1966:61).

11.3 FARMERS MIGRATING

On top of the mining, farmers were migrating from the Hunter River, from the Williams and the Manning, intent on taking up land. John Dunmore Lang encouraged the famine stricken Scots farmers to migrate in the 1840s, writing a book, *Cooksland in North-Eastern Australia*, in 1847, expressly to advocate settlement in the Clarence

district, and chartered ships to bring them (Daley 1968:63; Lang 1847 idem).

But it was the Roberston Land Acts which played a great part in intensifying this movement north. The land sales had begun in the forties, gathered pace in the fifties, and became a transforming influence in the sixties. But Daley points out the importance of the village reserves, established by the surveyors around the urban nucleii, in assisting the station hands, the timber-getters, the bullockies, and even the miners, to ply their trade while building a house on their own freehold land. This attracted many small settlers and gave opportunity to many of them. Casino, for instance, in a prosperous grazing district became a lively township, not from the influence of the graziers, but from the opportunity provided by nine and a half square miles of reserve surrounding the town, kept to keep encroachments from squatting at a sensible distance from the towns and enable the 'small men' to establish themselves (Daley 1966:69).

Ballina (formerly named Depford), surveyed in 1859, was a product of its times: when cedar was getting short, and its value was rising, when unemployed diggers, ex-sailors, storekeepers and cedar dealers, converged on the river mouth, it became a self-conscious political group in the sixties, It was the proclamation of the villages that began the process of community life, and the social cohesion that was emerging on the Northern Rivers, which was to project itself in local political life (Daley 1966:70-79).

'The large number of small farmers created a much denser network of population than had been the case when cedargetters and pastoralists occupied the region'. (Kass 1989:13). Though the cedar trade was languishing, new ports formed to load the farmers' produce for shipping to Sydney. A local transport network developed. There was experimentation with various crops, as corn became first a staple, and then a glut on the market.

The impact of the farmers on the rich basalt-derived soil of the Big Scrub north of the Richmond River was sustained and irreversible. The sequence of staple crops tried by the many small farmers who settled there was maize then sugar, timber still cut and milled, and then dairying. Fruit growing was started, fishing was a sideline. No other district in NSW at this time had more alternatives to chose from.

'In retrospect, the story of the Richmond reads like a fairy story,' writes Louise Daley, 'it all happened so quickly.' Within a period of fifty years western civilisation had been established in the wild and beautiful river valley of the Richmond River (Daley 1966:159). The Squatters had arrived first, and for 20 years had established their stations. 'The cedarcutters had their own free life, selling their labour to the Sydney dealers...but they had gained an independence which some had not known for many years.' Many settled in the towns and villages, and joined the third wave of farmers, industrious folk, realistic, and practical.

11.4 SUGAR GROWING AND MILLING

A rush into sugar cane began along the north coast in the late 1860s when the price of corn was low and sugar was high. By 1870 there were sugar plantations from the Hastings to the Manning, spreading to the Macleay and the Clarence. It was a cash crop, cultivated also on the Tweed by the 1880s. A series of mills were built, 14 on the Macleay between 1865 and 1873, but frost drove growers further north (Townsend 1993:82-3). Some mills operated both as timber mills and sugar mills.

Other mills were co-operatives owned by growers. Private mills appeared scattered all over the valleys, one listing noted 40 mills in the Richmond in the 1870s to 80s. The Colonial Sugar Refining Company arrived in 1869, opened three large mills at Darkwater, Ulmarra and Chatsworth, followed by the Broadwater mill, and one on the Tweed. They moved closer to the river mouths as time went on. Sugar growing helped to reinforce a denser pattern of settlement. Growth of the industry was strong between 1890 and 1914 (Ryan 1979:107).

11.5 DAIRYING

When sugar became less viable in the wake of a 'gumming' disease after the 1890s, many farmers turned to dairying. Many had migrated from the South Coast, when suitable fertile land was getting scarcer. They were ready to organise to gain access to markets, and founded cooperative creameries. Large butter factories emerged in the 1890s, some sited in the larger towns (like the NSW Fresh Food and Ice Company at South Grafton). They became prime locational influences in the regional distribution of dairy farms (Kass 1989:18-19).

Victorian capital invaded the Tweed valley near Kyogle in the 1890s, subdividing pastoral land for small parcels of 250 acres. Dairying spread settlement over a much wider area than the more intensive sugar-cane.

The down side was the clearing of much more rainforest in the Big Scrub and elsewhere. Pasture for dairy herds was planted in place of the vanishing forests.

11.6 TROPICAL FRUITS

Tropical fruits provided another diversification. Experiments were tried on the coast especially, to grow a range of fruits, but bananas became the best commercial crop by the 1890s around Coffs Harbour. The Tweed Valley then became favoured for bananas; grown by small producers they used higher, rougher country. Entrepreneur Numa Joubert sent produce to Sydney to compete with the Fijian trade. The Chinese and Indian minorities were active there for a while. At Woolgoolga, Punjabi people established a close settlement community in the late twenties (Kass 1989:20).

The Forestry Commission encouraged banana farmers at the height of the depression by offering blocks of forest land for rental, or yearly occupation permits. (Yeates 1982:162). Soldier-settlers after the war were offered banana farms at Mullumbimby.

11.7 SERVICE INDUSTRIES AND TOURISM

Since World War II the North Coast has developed a network of Service Industries to cater for tourists and newcomers. The quotas of the dairy industry had severe competition from Victoria, and many traditional dairy farms were up for sale, cheaply, and city Hippies moved in the 1970s and 80s (Thompson 1998). They have stayed there, particularly at Nimbin, and the second generation have grown up there.

As well, there is a strong tertiary education sector, led by the Southern Cross University at Lismore, National Parks and State Forests have been developed for open air touring, providing camping areas. A shifting population of retired people travel the Parks, working their way, often in groups, along the coastal reserves.

11.8 CONCLUSION

The mixture of various options for production developed from the convict era to beyond Federation proved to be advantageous for the North and Central Coast, with sequential occupation of the rich river valleys by a range of agricultural products. When the network of towns and villages was established, and transport difficulties overcome with better roads, more reliable traffic routes, safer harbour reconstructions and more people settling there, the area resumed some of its initial dynamism, and now attracts a growing number of people.

The Forests were the initial attraction, and despite their heavy logging over the years, they remain a resource of great consequence. They are still however, an issue for debate amongst local people, and conservationists. Their conservation has captured the high moral ground in political debate since the mid seventies. Political muscle was given to the government departments with responsibility for forested areas in New South Wales: the National Parks and Wildlife Service of NSW, and State Forests of NSW. Forest management by these government bodies is constantly monitored by the community, as indicated by the work of John Corkill and the North East Forest Alliance (see Appendix 1).

12. WOMEN AND CHILDREN

THEMES: NSW HO 7 Mining

NSW HO 17 Labour

AHC HT.03.03.03 Utilising mineral resources

HT.03.03.04.04.02 Working in the forest

Although there are not many references to European women and children living and working in the timber industry the team feels that it is important to record what we can of their lives in the forests. Because women are rarely mentioned in the literature it is not to be assumed that they were not there. One of us has written "all sites are women's historic sites" (Bickford 1993:203-4). This was a deliberately polemical statement; and although there are many sites related only to men in this survey, by deliberately searching for women we can people this history more inclusively with both genders and children, not just with men.

Work for everyone in the timber industry was hard. In some cases women and children worked beside their men, but in most accounts the women and children worked in whatever they could call home - the temporary tent or makeshift hut in the forest; the hut in the small community beside the sawmill; or the selector's cottage where to eke out a living the farmer took to timber getting as well as growing food or running a few stock.

12.1 WORKING AS A TIMBER DEALER

Only one reference has been found to a woman cedar dealer. This is Old Granny Greenhalgh who lived at Ballina on the Richmond River in the 1840s and 50s. She was ‘the smartest dealer on the river...looking for flaws and picking out the best cedar she could find for a Sydney or Melbourne buyer’ (Daley 1968:38).

12.2 LIVING IN THE FORESTS

Several travellers have remarked upon the effect of the dense canopy in the rainforest - the deathly darkness in the middle of the day. To most Australians today this can only be imagined, but in the 19th century in these untouched almost impenetrable forests this was the living and working space of many of the sawyers and their families. On the lower reaches of the Richmond River in the 1840s the Land Commissioner's men had to 'cut a path through the scrub with their swords' to reach the sawyers (Daley 1968:34). A young Anglican minister found one of these camps in 1850. After struggling for hours through the brush he eventually found seven huts on a creek and described the women and children as "quite pale with a yellowish tint" (Daley 1968:34). The explorer John Henderson was less understanding about the appearance of the children living in sawyers camps on the Macleay in the 1840s. He described them as "in the last stages of squalor and filth, their pale and emaciated features already showing that fever and ague...have begun their work" (Townsend 1993:21). Living without sunshine would have led to their pallor, and sleeping in a rough hut in a rainforest and playing outside in the mud would have made it impossible to keep clean.

12.3 WORKING IN THE FORESTS

The older children, including girls, worked in the forests helping to cut the timber and haul it to the creeks to float it down to collection points (Berzins 1996:16). As there were no tracks for bullocks to make their way, or grass for them to eat, all moving of the logs had to be done by hand. Only infants would have been spared the arduous work of the timber getter.

There are a few glimpses in the literature of the wives working beside their husbands. Berzins describes how in the 1930s depression Tottie Seccombe and her husband hauled logs at Ulong with horse and bullock

teams. She also went sleeper cutting. Also in the 30s depression Heather Hardacre at Dorrigo helped her husband fell trees and cut them up with the crosscut saw. She also drove the bullock team (1996:47). These women would have worked exceptionally hard, and it was perhaps the desperate times of the depression which made it essential for them to help their husbands eke out a living.

The forest environment would have contributed to the difficult conditions. Heavy rainstorms, everything humid and wet, and constant mosquitoes, leeches and snakes, would have made the trips to town for supplies and a drinking bout such a welcome change.

12.4 MAKING A TRIP TO TOWN

Like shearers 'knocking down their cheque' and other country workers, the sawyers and their wives would often drink heavily when they came to town. Henderson in the 1840s saw them as 'the most improvident set of men in the world' and their wives as 'dirty and forbidding' (Townsend 1993:20). In 1860 at Lismore the cedar cutters 'once a week..would come out of the scrub on horseback, their wives sitting astride the same horse; their mission to collect their weekly provisions...' (Ryan 1979:10). Towns such as Lismore started as places for the cedar getters to buy their basic provisions of flour, sugar, tea, and salt beef. The surveyor and explorer Clement Hodgkinson also saw the industry in the 1840s, in its earliest stages on the north coast, and he said about the cedar cutters when on the town 'The scenes...surpass all description. Men and women, (for many of the sawyers have wives), lying day and night on the bare grass in a state of intoxication and only recovering to renew their orgies' (Townsend 1993:21). The historian Norma Townsend writing in 1993 does not share the moralistic view of these early commentators. She describes the sawyers on the Macleay, Nambucca, and Bellinger as 'a relatively small group of skilled bush workers engaged in a dangerous occupation', with about 80% having some form of family life. Over a third of them were legally married, and many others lived in de facto relationships (Townsend 1993:22-27).

12.5 HOLDING THE FORT

As her husband moved further into the forest in search of new logs the wife was often left at home for long periods. If the sawyers huts were grouped together into a small camp then the women and children would have company. Rosanna Lane came to the Richmond River with her husband in the 1850s. She had thirteen children and was often left alone. In the camp she acted as a midwife for Aboriginal and white women, as well as growing vegetables and selling the surplus (Berzins 1996:16). The diary of Richard Glascott, a cedar cutter who lived in the timber camp at Emigrant Creek in the Big Scrub north of Lismore, indicates that his wife and other women gave birth in the camp, and the women assisted each other at this crucial time (Berzins 1966:16).

When the sawyer had finished a stand of cedar, he, his wife, and children would move their living quarters on to the next stand. Though living in a rough cabin or under a few sheets of bark in the sunless rainforest for long periods, the sawyer's wife and children were not condemned to that life forever. Often the family would give up the rainforest and stay in the area living in town as a small shopkeeper, or taking up a selection, clearing the land and farming.

12.6 MINING IN THE FORESTS

Just as the 1930s depression sent families timber getting, so mining also experienced a great increase of prospectors trying their luck. In 1935 Sister Grogan, the bush nurse west of Kyogle, applied with a group of men to mine gold at Iron Pot Creek. Nellie Millership went prospecting in the late 30s at Iron Pot Creek, Paddys Flat and the Cataract River. Later in the early war years she was extracting mercury ore on the Rocky River near Tabulam (Berzins 1996:47).

In the gold rushes of the 1850s miners often left home and went alone, but some were accompanied by their wives. At Oakenville Creek near Nundle by June 1852 there were 300 diggers and their wives and children. These instant communities led to the establishment of shops, pubs, boarding houses, and inns (Bayley 1953:26). In the Tooloom gold rush Clara Robinson's husband rushed off to the field and she had to follow him struggling with their possessions herself (Berzins 1996:47). At Tooloom in 1895 John Payne built an inn, shops and post office to service the miners (Heritage Item ID 3912117, Appendix 2). Like the sawyers' wives the miners' wives had to set up house in the most primitive conditions in tents or bark huts, cooking in the open and carting water by hand. If the gold field petered out then they would move onto the next one, though like the cedar cutters some stayed in the area to try their hand at selecting, and thus the north coast towns and communities were established.

13. BURIALS

THEMES: NSW HO 33 Death eg cemeteries

AHC HT.09 Marking the phases of life

HT.09.07 Disposing of dead bodies

HC.CB.901 Cemetery

HC.CB.906 Isolated grave

We can assume that many people would have been buried in forested lands in the UNE/LNE since first settlement of these areas. Most of these burials would now not be identifiable, for the people who died may have been itinerant forest workers who died before a town and dedicated cemetery were established for burials. The improvised timber headstones or crosses, or grave fences, which may have been made would by now have been destroyed or decayed in the moist forests.

State Forests manages 4% of public land in NSW and the National Parks & Wildlife Service manages 4.9% of public land (DLWC and Manidis Roberts 1996:3) but for the UNE/LNE are the Data Audit records that State Forests has listed 12 burials, and NPWS only one. As many National Parks and State Recreation Areas were transferred from State Forests, it is expected that there should be as many burials in national parks. It is likely that there were as many burials in both kinds of lands in the past but that the locations of those in NPWS lands have been obliterated or lost. There was a time in NPWS when historic sites were not valued as much as turning the land back to its supposed original natural state.

One historic cemetery has been noted on the Tenterfield Forest Map as being on freehold land, but adjacent to sites in a state forest. This is the cemetery belonging to the Tooloom Gold Field. The EIS Site Inventory Sheet points out that the Tooloom Gold Field (pop. in 1870s 5,000) around Upper Tooloom is primarily on freehold land. There is a segment of Leasehold land at Upper Tooloom with an historic cemetery next to it (in Freehold land) which presumably belongs to the goldfield. Parts of the goldfield are assumed by the site recorder to be in the Yabbra SF 394 pine plantation compartments 83, 84, and 85.

Goldfield remains are assumed also to be in the Leasehold land next to the cemetery.

Another grave is reported to be at the Venden's Sawmill site complex in Butterleaf SF. It has a dam, house footings, a chimney, sawmill remains, and a grave site of a female child who died at birth. Mark Allen, former Glen Innes District Forester, states in his report (Houghton File No. 5) that this is the oldest historic site in any of the Glen Innes Forest Management Area. This is UNE No. 77 in the Data Audit list (E406000 N6727900). It is not clear whether this the same site as the grave site No. 72 (no GR, or whether No. 72 is a different site. Mark Allen states that the infant's grave site could not be located but that it definitely exists, from the oral testimony of old people from the area.

13.1 GRAVE SITES LISTED IN DATA AUDIT

(Pearson, M. 1997 *Statewide Cultural Heritage Data Audit, Integration and Analysis (Non-Indigenous),* NSW Government and Commonwealth Government.)

Attachment B in Pearson's report is an inventory of sites in **State Forests** by CRA Study area. This list has been examined using Pearson's Category E - Type of Place.

State Forests LNE

4: 74. Stone cairns, Doyles River SF, Taree, unidentified Convict? Is this a grave?, GR= E417680 N6523800.

6: 101. Lower Bucca Cemetery, Lower Bucca SF, Urunga, Burial site, GR= E508000 N6663800.

10: 193. Hanging Rock Cemetery, Hanging Rock SF 671, Walcha, Burial site No GR.

10: 195. Hut and Chinese grave site, Hanging Rock SF 671, Walcha, grave, No GR.

State Forests UNE

2: 35. Graves of Chinese miners, Chaelundi SF 996, Dorrigo, Burial site Chinese, *GR E446500 N6690050.*

4: 72. Grave site, Butterleaf SF 307, Glen Innes, Burial site No GR.

7: 121. Dalmorton Cemetery, Dalmorton SF 814, Grafton, Burial site, *GR E450400 N6695400* (Heritage Item ID 3904448, Appendix 2).

7: 123. Grave site, Dalmorton SF 814, Grafton, Burial site, *GR E446600 N6711800*.

7: 125. Mangey's grave, Dalmorton SF 814, Grafton, Burial site, *GR E441700 N6716500*.

11: 212. Cemetery, Girard SF 303, Tenterfield, Burial, *GR E428000 N690300*.

14: 284. Cemetery, Orara West SF 535, Urunga, Burial site, *GR E492900 N6657300*.

14: 287. Mound of stones, Orara West SF 535, Urunga, Burial site?, *GR E492900 N6651400*.

Attachment C is an inventory of sites in **NPWS places** by CRA Study area. This list has been examined using Pearson's Category E - Type of Place.

NPWS UNE

None

NPWS LNE

1: 15. Gogerly Graves, Booti Booti SRA, Northern Region, Burial site, *GR E454100 N6424800*.

13.2 GRAVE SITES NOT IN DATA AUDIT

Grave of Edward Fitzgerald (marble upright headstone) at Kunderang East Station in Oxley Wild Rivers NP, LNE. (reference from the CHWG computer database held at NPWS Hurstville).

13.3 SIGNIFICANCE ASSESSMENT OF GRAVE SITES

Siobhán Lavelle, who has been Cemeteries Officer for the National Trust in NSW, and on the National Trust Cemeteries Committee, for this project inspected several UNE cemeteries. She has provided the following points for consideration with regard to the significance assessment of grave sites.

All Cemeteries and Lone Graves Generally

Cemeteries and lone graves reflect many diverse aspects of the past such as changing social attitudes to death and mourning, craft skills, decorative and symbolic traditions, landscaping and planting practices. They are valuable as an historical resource, as they provide a direct historical record of their local community and may also have social, cultural, aesthetic and scientific significance. In other instances they may make a strong contribution to local landscapes (landmark value) and community amenity.

Lone Graves

All lone grave sites (especially when they are formally marked and readily identifiable) may be considered to be of heritage significance because:

- Lone graves provide evidence of a fairly typical nineteenth century practice - burial close to the place of death. This practice was necessary because of the isolation of small population groups spread across large land areas and the lack of easy access for conveyance of the dead to formal sites such as churchyards or cemeteries within towns.

  Thus many lone graves will directly reflect the remoteness and isolation of the area during the historic period. They may also reflect the need for self-sufficiency and vernacular ingenuity in local communities.

General Cemeteries and Churchyard Burial Grounds

- These sites will be directly associated with the occupation of the nearby villages, mining camps, etc during the nineteenth century. In many cases the cemetery will be the major surviving visible physical evidence of a former township or community in this location.

- In many cases the general cemetery sites are a time capsule covering the period when nearby mines, etc were in use. Information recorded on the monuments and the form of the monuments (for example the large number of timber monuments and surrounds in the Drake Cemetery - Heritage Item ID 3913652, Appendix 2) may also attest to living and working conditions in the local community.

- In the case of many general cemeteries there may also be fairly large dedicated areas which are essentially unused (eg Dalmorton Cemetery -

Heritage Item ID 3904448, Appendix 2). This reflects the 19th century expectations of prosperity and consequent levels of settlement greater than what actually occurred.

* * * *

The CRA Heritage inventories for UNE and LNE listed in Appendices 2 and 3 to this report include cemeteries such as those at Drake and Dalmorton, referred to above, and also Wellingrove (Heritage Item ID 3911636, Appendix 2), but no lone graves, although attempts were made to find several. Small cemeteries and isolated burials tend to be unsignposted, are often in remote areas and difficult to get to. They can be difficult or impossible to find without a guide, and they may even be difficult to recognise. They are vulnerable to disturbance by cattle, so that headstones or crosses marking burials are knocked over and become invisible in long grass. A concerted effort may be required to record and assess isolated small cemeteries and in particular lone graves, with a view to determining appropriate management.

14. THE CONSERVATION MOVEMENT AND THE CHANGING STATUS OF FORESTS

THEMES: NSW HO 9 Environment

NATIONAL 1 tracing the evolution of the continent's special environments

AHC HT.03 Developing local and regional economies

HT.03.03.04 Utilising forest resources

HT.03.03.0404 Managing forest resources

HT.07.05.10.03 Conserving cultural or natural heritage

14.1 THE FOREST HERITAGE

This chapter traces the change of attitude, starting in the 1970s, to forests, rainforests to start with, and then extended to the whole forest heritage. The roots of the movement had been apparent some decades before, but the intervention of the Commonwealth Government in 1974, with the possibility of federal money, changed perceptions. The Terania Creek Inquiry focussed attention on State Forests practices, and called into question some of its previous policies. The National Parks & Wildlife Service was set up to conserve, rather than to 'utilise' forests. The State Forests of NSW had to adjust to a modified outlook and purpose.

The 1960s were a decade of changing perceptions, and changing priorities. The World War was over, and after a mammoth effort of allocating vast resources of manpower and materials to the war machine, reconstruction began. Australia had suffered a shortage of materials during the war, including forest products. Timber was in short supply, after the draining away of manpower into the armed forces. Expectations had changed.

The world of the old timber-getters had almost vanished. The lonely sleeper-cutter, the 'man versus nature' ideal of the axeman, was no longer the same. Mechanisation at the timber mills and in the forests themselves had changed work practices. Labour, traditionally poorly paid in the timber industry, was now in demand everywhere. Skilled woodsmen were hard to get, and hard to keep. Tractors and bulldozers came into use, clearing forest roads, making remote timber stands more accessible, knocking over trees and saplings, cutting swathes through the forest. World War II had created an increased demand for rainforest timbers especially, and rainforest logging was extended into previously uncut hillsides, on the North Coast escarpments.

At the same time, better research by foresters and ecologists alike and wider means of communication, were leading to a better understanding of the rainforest environment. The necessity to conserve rainforests not only for future harvest, but as valuable ecosystems in their own right came to be acknowledged, firstly by the scientists, and then by a new group of politically activated conservationists.

In 1967, the National Parks and Wildlife Service of NSW was set up to act as a management body for the conservation and protection of natural areas. A program of definition and gazettal of National Parks began. In 1982, the transfer of major rainforest areas from the Forestry Commission management to the National Parks

& Wildlife Service was under way. This was the culmination of a long and complex social and political process.

Some of the forest areas disputed had been the subject of intermittent conservation efforts for almost a century. A national park in the Border Ranges had been suggested in the late 19th century. Ideas from America, the ideals of reservation of a particularly beautiful or spectacular natural area, had been pursued at Yellowstone National Park there in the 1870s. George Perkins March had written his influential book Man and Nature in 1864. These ideas had inspired an Australian visitor, Robert Collins, to return and agitate for a reservation in the McPherson Range (Proudfoot 1984:53-54).

Significant community support for a national park on the Nightcap Range was apparent from 1910, when it was compared to the Blue Mountains for its beauty and health-bringing qualities. In the 1930s at Lismore, arguments about protecting the watershed at the head of local rivers were used. A proposal for the reservation of the escarpment forests between New England and Dorrigo National Parks also go back some decades.

Areas like the Border Ranges and Nightcap supported possibly the best remaining stands of rainforest in NSW, and had obvious attractions as dramatic mountain landscapes. Paradoxically, there was a lack of specific interest in rainforest as a different ecosystem to eucalypt forests from which the great bulk of timber was drawn by the Forestry Commission after the cedar had been 'creamed'. The perceptions of 'scrub', of 'brush', rather inexact, perjorative terms, used by the settlers, was carried over into Forestry perceptions. As late as the 1970s State Forests had a management policy of converting rainforest gullies to the preferred eucalypt forest by logging, burning, and planting flooded gum and blackbutt. Early silvicultural efforts concentrated on plantings of Hoop Pine and Bunya Pine (Prineas in Proudfoot 1984:12).

Demand for rainforest timbers increased from the 1930s with the development of veneer technology and the establishment of brushwood peeling mills. Increased pressure to log rainforest timber in the Border Ranges, triggered off a conservation conflict which grew as time passed.

The Conservation movement, buoyed up with a victory in the Colong Caves limestone mining dispute, and a mounting popular interest in ecology, was recruiting members and support. Their first major success was in the Boyd Plateau forests dispute, and then they turned their attention to the Border Ranges, already espoused by Murwillumbah people. 'This city-country axis set a standard pattern for political action which was to be followed by other conservation organisations such as the National Parks Association in later efforts to dedicate rainforest national parks on the Nightcap Range and the Clarence and Hasting Valleys' (Prineas in Proudfoot 1984:13).

14.2 COMMONWEALTH INTEREST AND THE CONCEPT OF THE NATIONAL ESTATE

Another player entered the field when the Government Inquiry into the National Estate brought down the Report in 1974, increasing attention to the Natural Environment, with a strong endorsement for conservation through reservation of parks and reserves. This turned attention to existing forestry practices, and for the first time highlighted them as 'an issue for public debate' (National Estate Inquiry 1974:122-133).

A feature of Commonwealth endorsement came in the form of small grants to conservation bodies. Suddenly there was money for administration and special projects, the conservation lobbies became more vocal and better organised. They began to capture the high ground of public opinion.

The Report, moreover, called into question some of the Forestry practices throughout Australia. It pointed out that until recently, Forestry bodies had been interested mainly in maintaining forests by selective logging for timber production, but new factors were emerging that might cause a radical change. The first was the increase in popular demand for recreation in forest areas, the second was the new intensification of foresting activities, especially large allocations of areas for wood-chipping for export, and a greatly increased pine plantation program. Linked with this was a policy of clear-felling in coastal forests.

These threatened certain values not linked with timber production, values that were prized as important to heritage: the aesthetic appeal of forests, the loss of wildlife habitats, and the uncertainty of environmental impacts such as nutrient loss, erosion, water quality, the effect on drainage systems, even fisheries. The Report pointed out that the public role in the use of the forests, and restraints on timber production for environmental protection, were common practice overseas.

The forecast was for increasing protests and public alarm about forest depletion and degradation unless there was a modification in forest policy to take account of legitimate demands. There was not enough known about a range of forest management practices, and forestry bodies were charged with 'unwarranted confidence' that the program of committing Australian forests to such a massive program of intensive forest use would not be detrimental to the national estate (National Estate Inquiry 1974:126).

Questions of the regeneration of native forests, investment in research, management emphasis on timber production, lack of training for foresters, needed to be addressed. Environmental concerns such as the silting up of streams below the forest areas, objectives in fire control schemes, capacity of soils in different areas, loss of habitat for native species, were becoming more important over time (National Estate Enquiry 1974:126).

The principle of 'multiple use forests' retaining recognised values as well as preserving timber for the production of wood was seen as feasible. Forest authorities and managers were held responsible for husbanding the forests for future generations, as well as providing a resource which had been a traditional one for two hundred years of settlement. Research, survey, and planning must include other disciplines as well as those available in the forestry profession. These were the recommendations.

That some of these forest uses might be incompatible, was a headache for the foresters, but the commitment of the Commonwealth Government was plain.

The Terania Creek Inquiry

This Inquiry became the focus of the forest conservation debate in the 1970s. With the politicisation of conservation issues, and their ability to make headlines in the Australian Press, there was renewed concern for the rainforests of the Nightcap Range on the upper North Coast. The level of debate became more sophisticated when the scientists entered to counter the claims made by the foresters.

There were several important publications at the time, as well as a torrent of popular literature in papers and magazines on the subject. V. & R. Routley published *The Fight for the Forests* 1975, and Helman at New England edited *Wilderness in Australia* 1976. Then the NSW Forestry Commission published its *Indigenous Forest Policy* in 1976. This added fuel to the debate, disclosing the intention to log the North Coast escarpment forests to the limits of economic accessibility.

The Inquiry became a long-running dispute, commanding much publicity, and probing into State Forest practices as never before. Although the Inquiry's report was favourable to the Commission's logging proposals, the Commission's case suffered heavily when evidence was given by several key witnesses, Dr Len Webb of the CSIRO and Dr Harry Recher of The Australian Museum, Dr M. Fox of the National Herbarium, and Peter Hitchcock of the National Parks of NSW. Disagreement within State Forests itself became apparent (Prineas in Proudfoot 1984:16).

When the *Environmental Planning and Assessment Act* was passed in 1980, the possibility of challenging a rainforest logging proposal in the newly constituted Land and Environment Court became apparent. The preparation of Environmental Impact Statements became mandatory before any contested plan was implemented. This meant that the Department of Environment and Planning could tender advice to the NSW Government on environmental matters generally, and could engage in critically assessing the Forestry Commission's proposals.

There was also a growing world-wide concern about rainforest destruction. Len Webb raised scientific interest in Australia's special place in the formation of rainforests, in his theory that Australian rainforests were representative of an extremely ancient flora, a centre for evolution and radiation of primitive flowering plants. This in turn enhanced perceptions of the scientific importance of NSW rainforests.

Terania Creek marked the turning point for NSW Rainforests. They were subsequently declared National Parks, and taken out of the control of the Forestry Commission, and then, in 1985, approved for World Heritage listing by ICOMOS. It also marked a turning point for forests generally. The Commission was later incorporated into an over-arching body called CALM, the Department of Conservation and Land Management, and was renamed State Forests of NSW. It remains to be seen how this affects its policies and purpose. The old directions had changed with the events of the seventies and eighties.

14.3 LOCAL PROTEST IN THE WINGHAM DISTRICT, MANNING RIVER

In May 1993, logging was proposed in Compartment 22 of the Bulga Forest near Elands by Boral Timber, and approved by the Forestry Commission. Members of the Wingham Forest Action Group started a protest, and mounted a blockade to oppose the entry of the timber trucks. This became a widely-discussed local issue, with arguments going back and forth for some months. There were anti-logging and pro-logging rallies, protest marches, letters to the paper, and articles from Forestry defending their position. The desire to retain the 'old growth forest' in Compartment 22 became an emotive issue, dividing the people, some of whom depended on timber-getting for their livelihood. Wingham being a traditional timber town, the local people feared massive job losses in the area, one estimate being 850 people (*Sydney Morning Herald*, 16 July 1993).

This area had had an EIS prepared, and the Minister for Planning, George Souris said he was attempting 'to balance conservation and the community's need for timber'. Forestry contended that the logging was allowing for 'sustainable growth' (*Manning River Times*, 14 July 1998). One of the protesters, Susie Russell, considers that the protest, though not successful, had some important results. One was the re-structuring of the Forestry Commission, and its emergence as State Forests; another was a new Forestry Policy Unit in the overarching Dept of Land Management and Conservation; and thirdly the formation of a special Police Response Unit for Forests (Pers comm to H. Brayshaw).

14.4 THE CHAELUNDI STATE FOREST CAMPAIGN - 1990 TO 1996

Another campaign in the Chaelundi State Forest was more important as it was fought out in the Courts, and became a landmark campaign, which follows on the victory of Terania Creek in the late 1970s. Tt is included here in some detail. The source is John Corkill (see Appendix 1).

John Corkill kindly sent us his Report on the campaign to protect tall old growth forest in the Pine Creek Catchment, on the western side of Chaelundi SF. This part of Chaelundi State Forest adjoined Guy Fawkes National Park, now part of Guy Fawkes Wilderness Area. The campaign was waged from 1990 to 1996, with Corkill himself being the principal advocate, but backed up by the North East Forest Alliance (NEFA).

This campaign was sparked off by research into bio-diversity, when Chaelundi SF was identified as having the highest density of arboreal mammals in eastern Australia. Dr Tony Norton, a fellow at the Centre for Resource and Environmental Studies at the Australian National University, stated this in a paper given in the late 1980s. By February 1990 scouts from the North East Forest Alliance (NEFA) were searching the Chaelundi for road works or logging without a previous Environmental Impact Statement being issued. They mounted a blockade on Broadmeadows Road to prevent access to Pine Creek catchment. Pine Creek is a tributary of the Boyd (and Clarence) River.

At this confrontation, thirteen arrests were made. One of the protesters, Giselle Thomas, appealed in March 1991 against her conviction on the grounds that no EIS had been made. Judge Jack Phelan upheld her appeal.

In March 1990, Corkill had begun proceedings in the NSW Land and Environment Court seeking an injunction to stop logging in 7000ha, 33 compartments of 'old growth forests' in the Chaelundi. Work was halted. Forestry admitted that no EIS had been prepared. Premier Greiner announced his timber strategy, and Forestry prepared an EIS for three compartments: 180, 198, and 200. This was displayed, and submissions received. Then the Commissioner for Forests approved the EIS.

The next year, 1991, the protesters' occupation continued. In May, the State election was held, and the Coalition party was re-elected. Tim Moore became the Minister for National Parks and Wildlife Service. An Interim Protection Order to stop logging was applied for under the NPWS Act, but the Minister for Planning, Robert Webster refused the ICO. More arrests at Chaelundi were made, but more local people join in.

Corkill then challenged the Chairman of the Heritage Council and the Minister, in the Land & Environment Court. In August the Forestry Commission and Police, 'closed' Chaelundi, and more arrests were made. A rally in Sydney gave support. NSW Cabinet still refused an ICO. Corkill began a legal challenge against the Forestry Commission of NSW, alleging breach of the NPW Act. More arrests and another Sydney protest followed.

Hearings were commenced in the Land & Environment Court, August and September. Mr Justice Stein ruled against the Forestry Commission in favour of Corkill, finding that roading and logging would kill 22 endangered species.

Premier Greiner then announced an appeal to the Court, alleging the decision's effect was to prevent economic activity in NSW. A regulation under the NPW Act was made exempting all forestry operations except those in the three compartments in question, effectively overturning the Court's ruling. The Court of Appeal dismissed the NSW Government appeal and upheld the earlier decision on the 1 November 1991.

Hearings re-commenced in the Heritage case in the Land & Environment Court. Justice Stein ruled against Hope, Webster and the Heritage Council in favour of Corkill. In December the Endangered Fauna (Interim Protection) Bill was introduced into NSW Parliament by Shadow Minister for the Environment Pam Allan, and was passed by both Houses, becoming law on 17 December 1991.

In March 1992 the Government passed the Timber Industry (Interim Protection) Act, and stripped the power of the Commissioner of FCNSW to determine FC ICOs, and gave it to the Department of Planning. A few months later, FCNSW produced the Dorrigo Management Area EIS, and claimed that it had been prepared in full compliance of the EP&A Act.

Corkill commenced new proceedings in the Land & Environment Court in May 1993 to challenge the adequacy of the Dorrigo Management Area EIS. The Department of Planning assessed it and recommended it not be approved.

Two years later, Bob Carr, promising 'Old Growth Forest' protection in his Labor election campaign, was elected on 25 March 1995. The following year, in September 1996, the Pine Creek Catchment of Chaelundi Forest was added to Guy Fawkes National Park and subsequently gazetted.

This campaign was one in which the determination of a group of committed people, well led, has been able to influence the outcome of proposals to log an old-growth forest on the North Coast. It has followed up the previous victories of the seventies and eighties, and has utilised the legal framework to bring pressure to bear on public instrumentalities.

The climate of public opinion became a political factor in the process, especially when the government of NSW changed, espousing the cause of the Chaelundi. Another result has been the more careful internal scrutiny of aims and intents generally by the public departments involved, and an attempt at a better understanding of the forest resources they have as their responsibility.

It can be seen that public interest in forests is still an important conflict area between conservationists and timber industry supporters, but that both sides are now becoming better informed, and less emotional.

15. GAPS IN THE HISTORICAL RECORD

THEMES: NSW HO 34 Important Events, sites of special value to local people, developments which changed the perception of the history.

It must be conceded that historical sites, though evocative, and important, cannot tell the history of a region by themselves. This is particularly true of the Forest regions of the North Coast and Tablelands.

The sites need to be linked to an understanding of the processes of history, which swept over the area. In the end they can only hint at the grand themes and movements that came together to shape a special region. People, too, are relegated to a back seat. Important figures are barely mentioned along the way: Clement Hodgkinson, Allan Cunningham, John Oxley, J. H. Maiden, Alan Strom, Len Webb, Edward Ogilvie, Captain Rous, Ellen Bundock, Major Innes, John Rudder, John Verge, William Guilfoyle, Steve King, William Yabsley, Tom Fenwick, William Lindt, Henry Kendall, Les Murray, William Robinson, Henry Dick, Judith Wright, Kath Walker, Frederick von Mueller, Rev William Woolls, Rev J.D.Lang, E.H.F. Swain, and many others. Interesting and varied people. Then there are the forest workers, timber-cutters, bullockies, farmers, forest officers and rangers, bush-fire brigades, mill workers, and sailors.

The forests themselves have to be studied and understood. They have assumed great importance for their people.

> Sometimes driving about the roads there ... I indulge in a kind of soundless visual symphony, watching the tree species change in response to the different soils. High up there will be forest oaks, whose non-deciduous needle leaves turn bronze in autumn, and used to be taken by the black people as their signal to move away from the coast to the sheltering hills. With these will be greyish-mauve spotted gums, then white mahogany and grey ironbark and seasonally orange-streaked grey gum, telling of stony ground; a brush box or two will indicate moister shaded soils, then perhaps the warm chestnut trunks of soaring tallowwoods will take over, with black ironbarks and maybe a shift to blackbutt on drier soils, then these would give way to dizzying blue gums, flooded-gum, and turpentine far down on the creek levels. (Murray 1997:62).

Forest history is too important to be only thought of as a collection of sites, some reclaimed by the forest itself, some destroyed by neglect, some hard to discover. It needs to be seen in the context of environmental history, a new scholarly field rather than one confined to a schematic background or prelude to history. The forests are historical agents themselves in their own right. Here, one can move between deep time and historical time, between nature and society.

The Australian experience of forests and their history is an important part of this country's ethos. The saga is not only a dismal tale of forests and land taken, exploited, and exhausted, by yoking it to the great capitalist forces of the market place. It is also of the land and the people who tried to use it; it has a tension between nature and culture, how the understanding has grown about the trees and ecology of the forest, how it might be used in the future.

This emerging field of study, built out of the traditions of historical geography and materialist history, of history and natural history, of humanist optimism and ecological pessimism, is according to Tom Griffiths, 'a product of a further swing of the pendulum between

cultural and environmental determinism' (Griffiths 1998:7). The Australian Forest History Society has recognised this in its three conferences, the last exhibiting a fruitful mix of practical observation and theoretical research, linked with articles by historians and prehistorians.

We have tried in this study to consider both sites and environmental history, the pattern of settlement, and its impact on the great forests of the northern regions, and how, in part, the forests themselves have responded to their treatment.

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