THE SPREAD OF SETTLEMENT
IN THE ORIGINAL NINETEEN COUNTIES OF NEW SOUTH WALES: 1788-1829
From a pencil sketch by G. W. Evans in the Mitchell Library.
THE SPREAD OF SETTLEMENT
IN THE ORIGINAL NINETEEN COUNTIES OF
NEW SOUTH WALES: 1788-1829

An Historical Geography

T. M. Perry.

A Thesis Submitted for the Degree of Doctor of Philosophy in
THE AUSTRALIAN NATIONAL UNIVERSITY
1957
DECLARATION

This thesis is based on original research conducted by the author immediately before and during the tenure of a Research Scholarship in the Department of Geography in The Australian National University.

[Signature]
T. M. Perry.
"Altho' Geography be the subject we undertake, yet to illustrate that, we have introduced a due Portion of the History of every Nation; but in this too we have been mindful to avoid Prolixity, remembering it is but a collateral Part, and only subservient to our proper Design."

- The Compleat Geographer
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Appendices</td>
<td>v</td>
</tr>
<tr>
<td>List of Maps</td>
<td>vii</td>
</tr>
<tr>
<td>List of Plates</td>
<td>viii</td>
</tr>
<tr>
<td>List of Abbreviations</td>
<td>x</td>
</tr>
<tr>
<td>Introduction</td>
<td>xi</td>
</tr>
<tr>
<td>Summary</td>
<td>xxi</td>
</tr>
<tr>
<td>Chapter 1: The Nineteen Counties – Descriptive Geography</td>
<td>1</td>
</tr>
<tr>
<td>Chapter 2: The Settlement of the Cumberland Plain</td>
<td>43</td>
</tr>
<tr>
<td>Chapter 3: The Spread of Settlement Beyond Cumberland</td>
<td>65</td>
</tr>
<tr>
<td>Chapter 4: Policy and Expediency: Land Settlement, 1826-9</td>
<td>108</td>
</tr>
<tr>
<td>Chapter 5: The Hunter Valley, 1788-1829</td>
<td>141</td>
</tr>
<tr>
<td>Chapter 6: The Western Districts, 1813-1829</td>
<td>214</td>
</tr>
<tr>
<td>Chapter 7: The South-western Districts, 1816-1829</td>
<td>258</td>
</tr>
<tr>
<td>Chapter 8: The Illawarra-Shoalhaven Coast, 1797-1829</td>
<td>302</td>
</tr>
<tr>
<td>Chapter 9: Summary and Conclusions</td>
<td>337</td>
</tr>
<tr>
<td>Appendices</td>
<td>353</td>
</tr>
<tr>
<td>Bibliography</td>
<td>428</td>
</tr>
</tbody>
</table>
LIST OF APPENDICES

Appendix | Page
---|---
1 A Note on the Division of New South Wales into Counties | 353
2 Physiographic Regions | 357
3 The Exploration of Cumberland | 360
4 The Settlement of the Forest Lands | 365
5 Attempts to Cross the Blue Mountains | 370
6 Seasonal Conditions, 1810-1820 | 375
7 Caterpillars | 379
8 New South Wales: Number of Cattle and Sheep, 1794-1829 | 385
9 New South Wales: Distribution of Population, 1821, 1825 and 1828 | 386
10 New South Wales: Distribution of Alienated Cleared and Cultivated Land, and of Livestock | 388
11 The Limits of the Area for Settlement, 1826 and 1829 | 394
12 New South Wales: Occupied Land, 1829 | 396
<table>
<thead>
<tr>
<th>Appendix</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>New South Wales: Adult Male Population</td>
<td>399</td>
</tr>
<tr>
<td>14</td>
<td>The Hunter Valley, 1828</td>
<td>402</td>
</tr>
<tr>
<td>15</td>
<td>Occupied Land in the Hunter Valley, 1829</td>
<td>410</td>
</tr>
<tr>
<td>16</td>
<td>The Western Districts, 1828</td>
<td>412</td>
</tr>
<tr>
<td>17</td>
<td>The South-western Districts, 1828</td>
<td>417</td>
</tr>
<tr>
<td>18</td>
<td>The Illawarra District, 1828</td>
<td>423</td>
</tr>
</tbody>
</table>
# LIST OF MAPS

<table>
<thead>
<tr>
<th>Map</th>
<th>Description</th>
<th>Following Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New South Wales showing Nineteen Counties</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>The Nineteen Counties</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Nineteen Counties – Topographic Map (In Pocket)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Physiographic Regions</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Cumberland Plain: Geological Formations</td>
<td>45</td>
</tr>
<tr>
<td>6</td>
<td>The Settled Areas, 1796</td>
<td>50</td>
</tr>
<tr>
<td>7</td>
<td>The Settled Areas, 1825</td>
<td>89</td>
</tr>
<tr>
<td>8</td>
<td>The Nineteen Counties, 1829</td>
<td>114</td>
</tr>
<tr>
<td>9</td>
<td>Hunter Valley: Geological Formations</td>
<td>142</td>
</tr>
<tr>
<td>10</td>
<td>Hunter Valley: Lands Granted, 1825</td>
<td>182</td>
</tr>
<tr>
<td>11</td>
<td>Hunter Valley: Lands Granted, 1830</td>
<td>183</td>
</tr>
<tr>
<td>12</td>
<td>Bathurst District: Granted Areas, 1824</td>
<td>234</td>
</tr>
<tr>
<td>13</td>
<td>Bathurst District: Lands Granted, 1829</td>
<td>235</td>
</tr>
<tr>
<td>14</td>
<td>Wollongong Sheet, Geological Survey (In Pocket)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>New South Wales, showing Throsby's Route to Bathurst</td>
<td>270</td>
</tr>
<tr>
<td>16</td>
<td>Southern Districts, 1829</td>
<td>273</td>
</tr>
<tr>
<td>17</td>
<td>Key Australian Military Survey 1:63,360 Maps</td>
<td>462</td>
</tr>
</tbody>
</table>

---

vii
LIST OF PLATES


The following plates will be found between the text and the Appendices at the end of the thesis.

Plate
1  Coastal Plain: the Hunter Valley near Rouchel Brook.
2  Coastal Plain: the Hunter Valley between Muswellbrook and Jerry's Plains.
3  Coastal Plain: the lower part of Fal Brook, a tributary of the Hunter River.
4  Coastal Plain: the northern end of the Illawarra Plain.
5  Highlands: the valley of the Grose River in the Hawkesbury Sandstone plateau.
6  Highlands: the Shoalhaven Gorge near Tallong.
7  Highlands: part of the Georgiana Highlands drained by the Abercrombie River.
8  Highlands: the valley of Cunningham's Creek in the Roxburgh Highlands.
9  "Shelf" Area: part of the Permian shelf near Rylstone.
10 "Shelf" Area: the Cox Valley (the original Vale of Clwydd) from Mt York.
11 Uplands: the Bathurst Plains with the sandstone plateau in the distance.
<table>
<thead>
<tr>
<th>Plate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Uplands: rolling country between Bathurst and Orange.</td>
</tr>
<tr>
<td>13</td>
<td>Uplands: the valley of the Yass River at Gundaroo.</td>
</tr>
<tr>
<td>14</td>
<td>Uplands: undulating country between Yass and Rye Park.</td>
</tr>
<tr>
<td>15</td>
<td>Uplands: the original Goulburn Plains now known as the Gundary Plain.</td>
</tr>
<tr>
<td>16</td>
<td>Uplands: the Monaro Corridor.</td>
</tr>
<tr>
<td>17</td>
<td>Eucalypt forest with a thick scrub undergrowth on the Hawkesbury Sandstone near Wiseman's Ferry.</td>
</tr>
<tr>
<td>18</td>
<td>Open eucalypt forest with <em>Callitris</em> near Breakfast Creek.</td>
</tr>
<tr>
<td>19</td>
<td>Eucalypt woodland on Black Mountain, Canberra.</td>
</tr>
<tr>
<td>20</td>
<td>Scrub with dwarf eucalypts on the fringe of French's Forest near Manly.</td>
</tr>
</tbody>
</table>
LIST OF ABBREVIATIONS

The following abbreviations are used in the footnotes:

B.T. Bonwick Transcripts (the Bigge Appendix of Evidence) in the Mitchell Library Sydney. Followed by box and page numbers.

C.S.I.L. The N.S.W. Colonial Secretary's In-Letters.

C.S.L.M.P. The N.S.W. Colonial Secretary's Letters to Miscellaneous Persons.

G.G.O.) Government and General Order, Government Notice, and Government Order. These Orders and Notices (and Proclamations) were published in the Sydney Gazette.

G.N. Government Notice.

G.O. Government Order.

H.R.A. Historical Records of Australia, followed by series, volume and page numbers.

H.R.N.S.W. Historical Records of New South Wales, followed by volume and page numbers.

L.S.N.P. Proceedings of the Linnean Society of N.S.W.

M.L. The Mitchell Library, Sydney. This indicates that the document cited is in the Library and has been used by courtesy of the trustees. The number following is the Library's catalogue number for the document.


R.S.N.J. Journal of the Royal Society of N.S.W.

S.G. The Sydney Gazette.
INTRODUCTION

While geographers as a whole do not seem to subscribe to any one definition of the scope of their subject, there are several views which appear to have won fairly wide acceptance. One of these is that geography is a study of the relationships existing between man and the environment in which he lives, and the other that it is a study of the spatial relationship of the natural and cultural features of the landscape (using this word in its widest sense) or of "areal differentiation". Neither of these statements is a completely satisfying one, and both leave a good deal to be desired, especially in view of the wide range of the subject as exemplified by the table of contents of any of the geographical journals - one suspects that the statement "Geography is what I like" comes close to being as good a definition as any. But what is historical geography? and where does it fit into this picture? Again, there is a fairly widely accepted statement: historical geography is a study of past geographies, or, historical geography is a reconstruction of past geographies. From this we may assume that historical geography has a three fold purpose: to find out what relations existed between man and his environment in particular places in past time, to establish the nature of former regional patterns,
and, perhaps, to trace the evolution of present geographical patterns. These objects would all appear to be legitimate fields of geographical research.

The statement that historical geography is a "reconstruction of past geographies" is an unfortunate one. It seems to imply that the object of the study is merely antiquarian: that it is interested only in establishing the bare facts of a past situation and nothing more. That is to say that the task is completed when, for instance, a map showing the distribution of settlement in New South Wales in 1825 has been constructed. The making of such a map could well be regarded as a reconstruction of a past geography since it involves the establishment of the nature and extent of a former distribution. But this is hardly sufficient. The student of agricultural geography is not likely to be satisfied merely by mapping a land-use pattern, or the geomorphologist by the measuring of the extent, altitude, and slope of a marine terrace. In both these instances the establishment of the pattern is only part of the job and the geographer having assembled the facts proceeds to interpret them - the land use pattern in terms of soil, climate and economic influences, and the terrace in terms of former sea-levels or earth movements. Yet it
seems to be implied that the historical geographer has finished his task when he has made his reconstruction. Such a view is hardly in keeping with the practice of geographers working in other branches of the subject, and a mere description of a former situation hardly warrants the use of the adjective "historical". A concern with the past is not necessarily history. If historical geography is to have any significance, then, it must be more than a mere reconstruction: it must involve an explanation and interpretation of the situation reconstructed and so adhere to the practice of the two subjects with which it has affinities. And the explanation and interpretation must be in terms of both historical (human) factors as well as geographical ones. All this would appear to be obvious enough, but judging from some of the works published as historical geography it does not appear to be so. Very often the historical geographer appears to be satisfied to explain the past situation he has recreated only in geographic terms. That is to say, only in terms of the physical environment and the possibilities it offered. Or if historical factors are considered, they are often so scantily or incompletely treated that the effect is jejeune if not
fatuous. To cite but one instance, the author of a paper on "The Origin and Early Growth of Brisbane" has omitted from his account of the origin and early growth of a penal settlement the working of the penal system of which it was part. Thus he complained that during its time as a place of punishment Brisbane was not allowed to assume its function as a port and that its development was being deliberately retarded by Sydney. This latter statement is partly true, the development of Brisbane was being deliberately retarded, but for a very good reason. It was the place of banishment for convicts committing crimes in New South Wales and was not conceived as having any function or future apart from being a place to which troublesome convicts could be banished. Such a consideration is surely as relevant to a description of the evolution of early Brisbane as the exploration of the district or the nature of its climate, topography or soils. The fact that it was omitted is not so much a reflection on the author as on the usual conception of the scope of historical geography. The geographer, qua geographer, is naturally hesitant to enter the field of another discipline but this hesitation to take into account elements which are not essentially "geographical" in their nature cramps the

1 L. J. Jay, in Geography 57 (1952), 166-72
development of historical geography as a branch of the subject and vitiates to a greater or lesser degree the value of the research done by geographers in the march-lands between history and geography.

From such an introduction it will be concluded that this thesis will be very much concerned with the historical as well as the geographical background of the spread of settlement in the nineteen counties of New South Wales. Its object is to give an account of the expansion of the settled area in the years prior to 1829. During the early part of this period settlement was, apart from the penal settlement at Newcastle, confined to the Cumberland Plain, a coastal lowland almost completely surrounded by a sandstone plateau which for many years frustrated the efforts of all who attempted to pass over it. But during the last decade of the period settlement spread rapidly into the areas beyond the plateau and the principal concern of the thesis is to describe the circumstances (both environmental and human) which led to this expansion and which influenced the character of settlement in the outlying areas. The thesis may be considered to have four main parts. The first two chapters provide the background to the study: the first giving an account of the essentially geographic
elements of the nineteen counties' environment, and the second, a brief account of the settlement of the Cumberland Plain itself. The third and fourth chapters, which constitute the second division of the thesis, discuss the spread of settlement from the Cumberland Plain. The third chapter describes the circumstances which made the settlement of new areas necessary, the extent of the newly settled areas and their more important characteristics. The fourth chapter discusses the imposition of limits on the extent of the area available for settlement in 1826 and 1829. The third section of the thesis consists of four chapters (5 to 8) devoted to the settlement of each of the four major areas of settlement outside the Cumberland Plain - the Hunter River Valley, the area to the west of the Blue Mountains, the Southern Tableland, and the Illawarra-Shoalhaven Coast. The fourth part consists of the final chapter in which the argument is summarised and some general conclusions in matters of fact and method drawn.

There are several features of the thesis which should be explained. First, that as some of the historical background essential to such a study has not been previously discussed, it has been considered
necessary to present a good deal of purely historical material in the body of the work. It is regrettably true that while the general features of the history of this period are well known, the details are not and that the Australian historical geographer is frequently forced to be his own historian - there are no substantial histories of land settlement or land settlement policy and so recourse had to be taken to the original sources and some of the material presented is here discussed for the first time. Secondly, no account is given of the activities of the Australian Agricultural Company. The reason for this is simply that in view of the vast amount of available source material on settlement generally and on the Australian Agricultural Company's activities it seemed better to ignore the latter completely and concentrate solely on the problem of the extension of the area occupied by individual settlers. Thirdly, the settlement of the Hunter River Valley is discussed in considerably more detail than that of any of the other regions. This is the result of a number of factors, among the most important of which is the fact that the availability of both historical and geographic source material has made it possible to give
a much more detailed account of the physical and human features of its settlement than is possible in the case of any of the other districts and so it has been treated at length as an example of the close relationship which existed between soils and settlement and which probably existed in other districts where the details of the situation are not as clearly understood. The Hunter also had a longer and a rather more interesting history than the other districts and this, together with the inclusion of a great deal of matter relevant to the settlement of all districts but which did not need presentation in each of the regional chapters, has made Chapter 5 a rather long one.

Though it will be fairly obvious from the footnote references, the historical part of the research has been confined principally to the primary sources. The fragmentary, and often unreliable nature of some of the secondary material (especially in periodicals) made it desirable to work through the primary sources from the outset. The major sources used are the Governors' despatches as published in the *Historical Records of Australia*, the Colonial Secretary's correspondence, the transcripts of evidence taken before Commissioner Bigge
and the private papers of a number of individual settlers. The *Sydney Gazette* also provided a good deal of information not available elsewhere. On the geographical side, material has been drawn from the authors whose works are listed in the Bibliography, and from field survey.

Grateful acknowledgement is made of the help given the author by Professor O. H. K. Spate and Mr. J. N. Jennings of the Department of Geography in the Australian National University and to the members of other departments in the University who suggested fruitful lines of enquiry and made useful criticisms and suggestions. Thanks are also due to Miss I. Goodin and Mrs W. Byrne, both of Canberra, who have typed the thesis. The maps were drawn in the Geography Department of the University by Messrs H. E. Gunther and K. Matveev and were reproduced by the National Mapping Office, Canberra. The plates are all from the author's photographs.

Part of the material presented in Chapters 3 and 8 has been published in the *Australian Geographer*, and a general summary of the spread of settlement up to
1826 has been published in *Historical Studies, Australia and New Zealand*.¹

SUMMARY

The thesis describes the salient physical features of the part of New South Wales included in the original nineteen counties which were proclaimed in 1829 and then discusses the settlement of the Cumberland Plain, the area in the immediate vicinity of Sydney. It shows how in the settlement of the plain variations in the quality of the soil led to the establishment of scattered clusters of farms, and how in the years 1810 to 1821 a series of droughts and caterpillar plagues made it necessary for the colony's stockowners to find new areas in which to graze their cattle and sheep. A reduction of the plain's stock carrying capacity rather than a shortage of land was the reason for the outward movement of settlers during these years. A general account of the spread of settlement from the Cumberland Plain over the encircling sandstone plateau into the surrounding areas of the Hunter Valley, western uplands, southern tableland and Illawarra-Shoalhaven coastal plain is then given, and the circumstances and policies which led to the imposition of "limits of location" in 1826 and 1829 are discussed. Four chapters are then devoted to a more detailed discussion of the way in which physical features,
governmental policy, and economic expediency affected their settlement.

The general conclusions drawn from the study are that during the period 1788 to 1829, the pattern of settlement was influenced to a large degree not only by the nature of the country (including its periodic visitation of drought and caterpillar plague), but also by its governor's policies, and that in each of the regions considered in detail differences in topography, climate and soil, in the class of settler who occupied them, and in the amount of government control of settlement, produced four quite distinctive types of land utilization and frontier society. Neither environmental nor human factors alone determined the pattern and nature of the settlement of the nineteen counties, and the changing relations (both in place and time) of these two sets of factors thus resulted in marked regional differentiations, a fact which rarely emerges in the generalised picture of early settlement in the standard histories.
Chapter 1.

THE NINETEEN COUNTIES:
DESCRIPTIVE GEOGRAPHY.

When the white settlement of Australia began in 1788 the continent had two names. Its western part which had been discovered, but not colonized, by the Dutch was known as New Holland; and the eastern part, discovered by Captain James Cook, R.N., received from him the name New South Wales. While sailing northward along this new coast Cook charted and named its most prominent features, and at Botany Bay and Endeavour River the members of his party had an opportunity of seeing something of the country. Until 1788 Cook's charts and journals, and the observations made by others on the "Endeavour", constituted the whole corpus of knowledge of New South Wales, so that the first unwilling colonists who sailed with the "First Fleet" in May 1787 knew relatively little of their new home which was to be at Botany Bay.
Chapter 1.

When English colonists first arrived in North America they found a new but not entirely unfamiliar land. Its seasons were the same as they had known and the climate, though inclined to greater extremes of heat and cold was not vastly different from the one they had experienced at home. The pine forests were new, but oak, elm, ash, birch, beech, poplar, maple and willow trees were there and differed but little from those in the British Isles — and there was even holly with the same bright glossy leaves and red berries. But in January 1788, the antipodean colonists found themselves in a really strange and up-side-down land. January brought them heat, and July was cold. There was wood which would not float (Casuarina), trees of majestic proportions so riven with veins of gum that it was scarcely possible to obtain a plank from them, and timber which shrunk and warped so much in drying that their first storehouse had become useless by May. The wild life too accentuated the strangeness. Kangaroos hopping through the scantily leaved forests; emus unable to fly but running awkwardly on ungainly legs; the shy, tree-climbing bear with outsize ears; and the birds whose calls were hoarse dry screeches or gales of raucous laughter all added to the
Chapter 1.

nondescript character of the place. The grasses grew in clumps and tufts, not in a sward; and the soil was either a dry sand or a hard clay. The natives were scrawny, ill-kempt, and ignorant of all but the most primitive arts and skills. The whole effect was in fact somewhat depressing. "The country, my Lord, is past all dispute a wretched one...."¹

To this land came some thousand souls. About a quarter of them were free-men; the remainder, convicts banished from their homeland. The story of their arrival, of the founding of Sydney, of the first pitiful attempts at agriculture and ultimate success in breeding fine-woolled Merino sheep, and of their occupation of the plains beyond the ranges which had at first confined them, has been told - in its essentials, at least - often enough to be familiar. But while the action of the play is well known, the stage setting and the details of movements and "business" within that setting have received

Chapter 1.

scant attention. It is the purpose of this thesis to tell a portion of that story but in so doing to be rather more concerned with the stage and the "business" than with the story itself: to tell how the settlement grew and spread in relation to the ground in which it grew and over which it spread.

In 1829, the settled area of New South Wales was divided into nineteen counties beyond whose outer boundaries settlers would not be granted land. This thesis will be confined in its scope to the settlement of these counties up to the year in which they came into being: it will tell of the expansion of the colony from its establishment on the shores of Port Jackson in 1788 to its restriction within the nineteen counties in 1829.

The counties occupy the central-eastern part of the present state of New South Wales (see Map 1), their remotest parts being little more than 200 miles from Sydney. The boundaries of the individual counties are shown on Map 2, while Map 3 (in the pocket at the

2. See Appendix 1, A Note on the Division of New South Wales into Counties.
Chapter 1.

end of the volume) is a small scale topographic map of the area. This chapter will be devoted to a discussion of the salient features of the geography of the nineteen counties — physiography, climate, vegetation and soils — and is intended as a general introduction. In later chapters the geography of particular regions will be described in greater detail in conjunction with the discussion of their settlement.

I. PHYSIOGRAPHY.

Three great physiographic divisions are traditionally recognised in eastern Australia: a narrow coastal plain, a belt of highlands flanking the coast, and an interior lowland basin drained by the Murray-Darling river system. The Nineteen Counties include within their boundaries a portion of each of these provinces. There is a discontinuous plain along their coast, their central portion consists of a series of highly dissected plateau remnants, and on their west there is part of the eastern rim of the Murray-Darling basin. This is drained by three of the largest tributaries of the Murray-Darling system, the Macquarie, Lachlan and Murrumbidgee Rivers, and will be referred to
Chapter 1.

here as the "Interior Uplands". In the extreme north-west and west, the counties include small areas of true "Western Plains" country.

In the Nineteen Counties it is possible to recognise a number of regions within these major divisions and these are shown on Map 4.\(^3\) A description of the salient features of each division and of its regions follows.

A. Coastal Plains.

There is no continuous coastal plain along the eastern side of the Nineteen Counties, but rather a series of small plains separated by ridges running down from the highlands to the sea. Except for the Hunter River Valley and the Cumberland Plain, the coastal lowlands are small and do not extend much more than about 20 miles inland. Most of the plains are riverine occupying the valleys of the short, swift flowing coastal rivers. In their upper parts these valleys are deep and narrow, and their gradient is steep. Their middle courses are distinguished by fairly wide flat-floored

\(^3\) See also Appendix 2 "Physiographic Regions".
New South Wales
The Nineteen Counties

PHYSIOGRAPHIC REGIONS

Coastal Plains

C1 Manning Plain
C2 Port Stephens Lagoon and Valley Plain
C3 Hunter River Valley
C4 Lake Macquarie Lagoon Plain
C5 Cumberland Plain
C6 Illawarra
C7 Shoalhaven Delta
C8 St George's Basin Plain
C9 Croobyar Plain
C10 Clyde River Valley
C11 Buckinbowra River Valley
C12 Moruya River Valley

Highlands

H1 Barrington Ranges
H2 Liverpool Range and Merriwa Plateau
H3 Sandstone Plateaux
H3A - Sutton Forest Basin
H4 Roxburgh Highlands
H4A - "Shelf" Area
H5 Georgiana Highlands
H6 St Vincent Ranges
H7 Gourock and Tinderry Ranges
H8 Clear-Brindabella Ranges
H9 Canobolas

Interior Uplands

U1 Cudgegong-Talbragar Upland
U2 Western Upland
U3 Southern Tablelands
U3A - Lake Plains and Ridges
U3B - Monaro Corridor

Interior Plains

P1 Macquarie-Talbragar Plain
P2 Lachlan Plain

The method used in delimiting these regions is discussed in Appendix 2, "Physiographic Divisions".
NEW SOUTH WALES
THE NINETEEN COUNTIES
PHYSIOGRAPHIC REGIONS

Boundary of the Nineteen Counties
Coastal Plain Regions
Highland Regions
Interior Upland Regions
Interior Plain Regions

A key to the numbering of these regions is given on the opposite page.
Murrurundi Gap
Cassilis Gap
Pandora's Pass
Morulan Ramp

Map 4.
Chapter 1.

valleys surrounded by steep ridges and containing stretches of alluvium on either side of the streams. In their lower courses, the rivers meander through swampy deltas, which are usually small and fringed by sand-dunes on the seaward side. The river mouth is frequently wholly or partially blocked by a sand bar.

Twelve separate coastal plain regions may be distinguished: 4

C1 The Manning Plain consists of the delta and alluvial terraces of the Manning River and of the tributaries joining it near its mouth - the Landsdowne and Dawson Rivers, and Cedar Party and Dingo Creeks. The delta is swampy and divided into several islands by distributary streams. On the seaward side it is fringed with sand-dunes and to the north merges into a dune-and-swamp plain, but on other sides it is bounded by fairly high and steep ridges. The plain does not extend far beyond the delta except in the valley of the Landsdowne River to the north-west. Above Taree there is no flat land along the Manning except for the alluvial terraces within its meanders, and these are extremely small above Mount George.

C2 The Port Stephens Lagoon and Valley Plain consists essentially of the swampy lowlands and sand-dune areas surrounding three large lagoons, and of the valleys of streams emptying into them. Wallis Lake, the most northerly, and

4. The numbering of the regions corresponds with their numbering on Map 4, and as far as possible place names mentioned in the text will be found on Map 3.
Chapter 1.

Port Stephens, the most southerly of the three, have exits to the sea, but Myall Lake, the centre one, has no direct discharge to the sea, emptying instead into Port Stephens. The greater part of the country surrounding these lagoons is so swampy or sandy as to be of little use, and the most profitable parts of the plain agriculturally are the valleys of the rivers flowing into them. The most important of these valleys are those of the Wollamba, Wang Wauk and Goolongolok Rivers flowing into Wallis Lake; of Myall River which flows into the southern end of Myall Lake; and of the Karuah River (which runs into Port Stephens) and its tributary, Ward's River. This last valley extends north from the western end of Port Stephens and the plain of which it is part actually continues over the low divide at the head of Ward's River and includes the valleys of the Avon and upper Gloucester Rivers, tributaries of the Manning.

C3 The Hunter River Valley is the largest of the coastal lowlands running inland some 80 miles in a north-westerly direction. It will be fully described in a later chapter dealing with its settlement. (See chapter 5 and Plates 1, 2 and 3).

C4 The Lake Macquarie Lagoon Plain is similar to the Port Stephens Plain, but unlike it does not include any significant river valley sections. Lake Macquarie itself is surrounded by quite hilly country, the only area of lowland being to the south-west. This continues all around Tuggerah Lake, the other large lagoon in this section of coast.

C5 The Cumberland Plain is a saucer-like depression resulting from the down-warping of part of the sandstone plateau which almost completely surrounds it. This plain was the
Chapter 1.

site of the colony's first settlement and is described in Chapter 2: "The Settlement of the Cumberland Plain."

C6 The Illawarra Plain occupies a narrow strip between the sea and the steep scarp of the highlands which rise abruptly on its west. It consists of three main parts: (a) a northern section made up of a number of small valleys separated by low ridges; (b) the lowland surrounding Lake Illawarra, a lagoon, and the valley of Macquarie Rivulet which empties into its south-western corner; and (c) the valley of the Minnamurra River. This area will be more fully described in Chapter 8. (See Plate 4).

C7 The Shoalhaven Delta, built up by the Shoalhaven River and Broughton Creek, a tributary joining it a few miles above its mouth, is the largest area of alluvial soil south of the Hunter River Valley. On the north-west the delta is fringed by foothills whose soils are clayey or basaltic and above which the steep scarp of the sandstone plateau rises to about 2,000 feet. To the south-west the plain is bounded by the Upper Marine sandstone Plateau. This section of the plain will be more fully described in Chapter 8 in which an account of its settlement is given.

C8 The St George's Basin Plain includes the low but hilly country fringing Jervis Bay and the lower land about St George's Basin and Cudmirrah Lake. The greater part of the country is this section of the coastal plain possesses shallow sandy soils derived from the underlying Upper Marine sandstones, though there are a number of fairly small pockets of clayey soils in places. Along the creeks the land is rather swampy, while that flanking the entrances of St George's Basin and Lake Cudmirrah consists of fixed and live sand-dunes.

C9 The Croobyar Plain includes a pocket of alluvial soils along Croobyar Creek and on its south, an
Chapter 1.

area based on an intrusion of monzonitic rocks whose soils are much superior to those of the surrounding sandstone country.

C10 The Valleys of the Clyde, Buckinbowra and C11 Moruya Rivers form three tongues of lowland C12 thrust into the surrounding steep hilly country. Along the rivers there are narrow ribbons of alluvium and in most places there is little in the way of foothills between these and the steep ridges of the surrounding country.

B. Highlands.

The belt of highland country which occupies the central portion of the Nineteen Counties is a series of dissected plateau blocks, the remnants of a great peneplain elevated during the late Tertiary Kosciusko Uplift and subsequently subjected to vigorous stream erosion. In many places little of the original surface can be discerned; this being particularly true of the ranges to the north and south-west of the Nineteen Counties, but in other parts a level skyline, though broken by deep ravines, betokens the former extent of this plateau. The highest parts of the highlands are to the south-west where just beyond the Murrumbidgee River peaks rise above 6,000 feet, but the greater portion of the highland country is less than
Chapter 1.

3,000 feet high and the areas which are above 4,000 feet are quite small. (See Map 3).

H1 The Barrington Ranges are, like the ranges to the south-west of the Nineteen Counties, among the highest and most severely dissected parts of eastern Australia's highlands. At Barrington Tops (5,200') a small portion of the peneplain surface remains, but elsewhere it has been completely removed by the many short, fast-flowing streams which have reduced this area to one of deep valleys and high, steep-sided ridges on which there are a number of outstanding peaks (e.g. Mt McKenzie 4,700', Mt Cockcrow 4,588', Mt Woolooma 4,900' and Mt Royal 3,885'). An idea of the depth of the dissection in this area may be gauged from the fact that in the eight miles between Gary's Peak on the Barrington Tops and Stewart's Brook there is a drop of 3,404 feet (5,064 to 1,660 feet). Some of the highest peaks have been able to withstand erosion by virtue of their capping of Devonian granite or of Tertiary basalt while the softer Carboniferous rocks of which the remainder of this region is composed have been more easily eroded.

H2 The Liverpool Range and Merriwa Plateau are areas of Tertiary Basalt, which was poured out from a series of volcanoes between Murrurundi and Coolah. Along the centre of the range there is a well defined ridge on which a number of peaks rise above 3,000 feet. From this ridge spurs run north and south to the Liverpool Plains and the Merriwa Plateau. At the eastern end of the Liverpool Range, there is a gap which gives access from the Hunter River Valley to the Liverpool Plains. The Merriwa Plateau on the south side of the Liverpool Range is an area of more or less parallel ridges and valleys running north and south. On the north it merges into the foothills of the Liverpool Range and on the south it verges on the sandstone plateau country to the north of the Goulburn River. While the streams which drain the plateau occupy wide
valleys, they have very narrow flood plains and often the actual bed of the stream is quite deeply incised in the valley floor. At the south-western corner of the plateau, there is another important gap, the Cassilis Geocol, which provides a route (as yet little used) between the Goulburn-Hunter valley and the interior plains of the Talbragar and Castlereagh rivers.

H3 The Sandstone Plateaux form the greatest single unit in the Nineteen Counties' Highlands. Their northern portion stretching from the Hunter River Valley to the Shoalhaven River is capped with Triassic Hawkesbury Sandstone. This section has been considerably warped and is higher in the north, west and south than in the east, where the most violent warping and faulting have produced a depression in which the Wianamatta Shales, which once completely overlay the Hawkesbury Sandstone, have been preserved and form the Cumberland Plain. In places the remnants of flows of Tertiary basalt stand above the plateau surface, breaking the overall flatness of its skyline with rounded domes. There are three principal groups of these: one in the north-west where a number of peaks rise above 3,500 feet - Mt Coricudgy 4,180', Mt Coorongooba 3,870', Mt Nullo 3,848'; one on the north side of the Blue Mountains (the section of the plateau west of the Cumberland Plain) - Mt Tomah 3,278', Mt Wilson 3,276', Mt King George 3,474'; and one in the vicinity of the Sutton Forest Basin (see H3A below) where some of the most extensive of the residuals are to be found and where the highest points rise little more than 2,400'. In the east the general level of the plateau is about 2,000 feet: Mt Wambo (near Singleton) in the north is 2,120 feet high, Blue Mountain (near Hazelbrook in the central part rises to 2,385 feet, and Good Dog Mountain in the south is 2,000 feet high. In the west, however, it is somewhat higher, having a level of about 3,700 feet near Lithgow. The surface, while presenting a generally flat skyline, is gashed by deep canyons in which the river may be as
much as 1,800 feet below the plateau surface. The typical valley form is either a narrow V or a wide U-shaped one surmounted by sheer cliffs which may be several hundred feet high. Two of the most remarkable of the U-shaped valleys are Kangaroo and Burragorang Valleys. Kangaroo Valley, at the southern end of the Hawkesbury Sandstone plateau, has been cut by the Kangaroo River and Barrangarry Creek; and Burragorang Valley, by the Wollondilly where it enters the western side of the plateau. Both valleys have wide, fairly flat floors encircled by steep detritus slopes and the characteristic cliffs of the Hawkesbury Sandstone. Some of the rivers which have cut these canyons flowed across the pre-uplift peneplain and during the uplift, which apparently extended over a long period of time, were able to maintain their course, so becoming deeply entrenched in the rising plateau and at the same time breaking it into a number of sections. Thus there are several streams whose headwaters lie to the west of the plateau and which flow through it from the west to the east. The Colo, Cox, Wollondilly and Shoalhaven Rivers all rise to the west of the plateau and flow through it in deep gorges. (See Plates 5 and 6).

On the north-east, west and south, the Hawkesbury Sandstone plateau is fringed with Permian Sandstones (mostly Upper Marine) which are not of any great extent except in the south where they carry the plateau south from the Shoalhaven River to Durras Water. This area is similar to the Hawkesbury sandstone plateau, having a relatively level skyline above which extrusions of Tertiary basalt rise in rounded domes (e.g. Mt Coolumburra 2,601'), and being deeply riven by the streams draining it.

H3A The Sutton Forest Basin is, apart from the Cumberland Plain, the largest of a number of areas (most being quite small) in which depressions in the surface of the Hawkesbury sandstone have preserved remnants of its former
Chapter 1.

cover of Wianamatta Shales. Within the basin there are a number of Tertiary basalt residu­als forming steep-sided, rounded hills, some of which are tabular and all of which rise conspicuously above the more gently undulating surface of the shale. The greater part of the basin is drained by the Wingecarribee River, a tributary of the Wollondilly, while the eastern and southern portions are drained by creeks flowing into the Nepean and Shoalhaven Rivers. This area will be more fully described in Chapter 7.

H4 The Roxburgh and Georgians Highlands (named after the Counties of which they occupy the greater part) flank the sandstone plateaux on the west, and are separated by an upland region drained by the Belubula and Fish-Macquarie Rivers. Unlike the plateau both are areas of fairly complex geology, consisting of Silurian and Devonian slates, sandstones, limestones, cherts, tuffs, quartzites, shales and con­glomerates, together with granites and flows of Tertiary basalts. Like the plateaux these are areas of youthful dissection. There is but little peneplain surface now in evidence, the country having been vigorously eroded by a close network of streams and reduced to a series of deep valleys and steep-sided, narrow­crested ridges. The hardness of the rocks hinders the widening of valleys so that most have a very narrow floor and little alluvial material along the river. The Roxburgh Highlands are drained by the Macquarie River and its tributaries, the Turon River, Pyramul Creek, and the Cudgegong River, but the Georgians Highlands lie athwart the main divide so that their eastern part is drained by the Cox and Wollondilly Rivers and their western part by the Fish and Campbell Rivers (which unite to form the Macquarie) and by the Abercrombie River, a tributary of the Lachlan. (See Plates 7 and 8).

H4A The "Shelf" Area separates the sandstone pla­teaux in the east from the Roxburgh Highlands
Chapter 1.

to the west. The "shelf" is not continuous, but is a series of wide gently undulating plains separated by ridges. The most southerly of these is comprised of Megalong and Kanimbla valleys to the south-west of Blackheath, and proceeding north others are found at Hartley Vale, Lithgow, Marrangaroo, Wallerawang, Cullen Bullen, Ben Bullen, Capertee and Rylstone. Each of these is bounded in the east by the free face and detritus slope of the sandstone plateau and in the west by the deep valleys and steep ridges of the Devonian Roxburgh Highlands. The streams crossing the shelves have a very slight gradient on the shelf, but having left it follow a much steeper course and become entrenched in a narrow valley. The relief of these shelves reflects to a great extent the plane of unconformity between the underlying Devonian strata and the softer Permian with which they are surfaced. The Triassic and Permian shales beneath the sandstone capping of the plateau have allowed a comparatively rapid retreat of the sandstone scarp by undercutting, while the Devonian rocks below (which are in places strengthened by igneous intrusions) have been more resistant and a thin cover of the Permian strata has been preserved on the comparatively flat Devonian surface on which it rests. The surface covering of the shelves varies with the amount of the Permian removed so that there is a wide range of soil types to be found varying according to their parent material which ranges from a coarse conglomerate (at Marrangaroo) to soft shales. Clay soils seem to be the most frequently encountered soil type on the shelves, these being derived from either the Permian shales or the Triassic (Narrabeen) shales which underlie the sandstones. (See Plates 9 and 10).

The St Vincent Ranges (named after County St Vincent) extend in a fairly narrow belt southward from the sandstone plateau. In this area most of the ancient plateau surface has been removed and the area is essentially a
rugged one with deep narrow valleys separated by high narrow, steep-sided ridges. In their northern and western portions the ranges are drained by the Shoalhaven River and its tributaries, and eastern and southern parts are drained by the Clyde, Deua and Moruya, and Buckinbowra Rivers. Except in their lowest courses, the valleys of these rivers are narrow floored and do not contain any appreciable extent of flat land.

H7 The Gourock and Tinderry Ranges lie in the form of a wide V between the upper courses of the Shoalhaven and Murrumbidgee Rivers, the space within the arms of the V being occupied by the Queanbeyan River, a tributary of the Molonglo and ultimately of the Murrumbidgee. Both ranges include large areas of granite (mostly Devonian). The remainder of the ranges and the intervening country consists of Ordovician sandstones, shales, schists, limestones and phyllites.

H8 The Clear-Brindabella Ranges consist of a series of more or less parallel ridges running approximately north and south on the western side of the Murrumbidgee. The principal ranges in the east-west order are: the Clear Range, the Booth Range, the Scabby Range, the Tidbinbilla Range, the Bimberi-Brindabella Range and the Fiery Range. For the most part these ranges are composed of granites although part of the Brindabella Range consists of Devonian rhyolite, dacite and tuff with some interbedded sediments, and Tidbinbilla consists of quartzite. The highest points on all these ranges rise above 5,000 feet (Mt Clear 5,262'; Booth 5,200'; Gudgenby 5,712'; Tidbinbilla, 5,124') but the greatest elevations are found on the Bimberi-Brindabella Range where a number of peaks are more than 6,000 feet high (Mt Kelly, 6,001'; Morgan 6,150'; Bimberi 6,274'; Gingera 6,092'). To the south these ranges verge on the high plateau country of Monaro and many parts of them, like the Monaro country, are snow-covered during the coldest months of winter.
Chapter 1.

This country drains into the Murrumbidgee which almost surrounds it; those parts which do not do so directly drain into it via its tributary streams, the Naas, Gudgenby, Paddy's, Cotter, Goodradigbee and Tumut Rivers. (See Plate 16).

Mount Canobolas is the central peak of a small area of volcanic rocks which represents the ruins of a broken down volcanic cone. Rising to 4,576 feet this dome forms a conspicuous landmark throughout the surrounding undulating upland country.

C. Uplands.

The undulating and hilly upland country which skirts the highlands and forms an intervening zone between the highlands and the broad, almost level, interior plains of New South Wales, is not as homogeneous a physiographic unit as would be ideal. It includes a wide variety of landform types ranging from flat, lake-bed plains to ridges of quite rugged country, but nowhere are such landforms extensive enough to warrant their recognition as separate units and they are, on the whole, somewhat lost in the great areas of wide, shallow valleys; long, gentle slopes; rounded hilltops, and subdued relief which characterise the major part of this area.

Three divisions may be recognised in the upland country:

1. The Talbragar - Cudgegong Upland which consists of the broad middle valley of the Cudgegong
river and its tributary Cooyal Creek together with the country drained by the headwater streams of the Talbragar River. Along the Cudgegong there are large areas of wide alluvial flats.

The Western Uplands are bounded to the north by the Castlereagh - Talbragar Plain and to the south by the Lachlan Plain and the Georgiana Highlands. In the east a narrow tongue is thrust between the Roxburgh and Georgiana Highlands. Their northern part is drained by the Bell River (which forms the western boundary of the Nineteen Counties) and consists for the most part of Silurian and Devonian sandstones, conglomerates, shales and limestones with some Tertiary basalts in the areas to the west and north-north-west of Canobolas and areas of alluvium along the Bell River and Curra Creek. The eastern extension of the uplands is drained by the Fish and Campbell Rivers which join near Bathurst to form the Macquarie. In this part there are fairly wide bands of alluvium flanking the main streams, and wide undulating areas of granite country (the original treeless Bathurst Plains). The southern part, which is drained by the Belubula River (a tributary of the Lachlan) contains some extensive areas of alluvial material and consists for the most part of Silurian shales, cherts, tuffs, porphyry, and limestones. To the south-west of Canobolas there are some andesitic flows, intrusions and pyroclastic rocks. While the harder rocks in this upland country have produced more angular landforms, the general dominating feature of this region is to be found in the subdued relief and the broadly undulating aspect of the country. (See Plates 11 and 12).

The Southern Tablelands are in many ways a southern counterpart of the Western Uplands, but they are more extensive and contain a slightly wider range of landforms. Nevertheless, they have as a dominating feature the same subdued relief, wide shallow valleys and
Chapter 1.

broad rounded ridges which typify the Western Uplands. (See Plates 13, 14 and 15). Two major drainage divides cross the Southern Tablelands and meet in a small basin of interior drainage at their centre. The north-western part is drained by the Lachlan River and its tributaries; the south-western portion by the Murrumbidgee and Yass Rivers; the south-eastern part by the Shoalhaven, and the north-eastern section by the Wollondilly and Cookbundoon Rivers. At the centre, a small area drains into Lake George, an intermittent lake. Within this region there are quite extensive areas of lacustrine deposits giving extensive flat plains (Gundary Plains, Molonglo Plains), but the greater part of the country consists of Devonian, Silurian and Ordovician granites, porphyries, shales, sandstones and limestones. Two sub-regions within the tablelands are noteworthy:–

U3A An area of lake plains and ridges which lies almost in the centre of the tablelands and contains a number of ancient lake-bed plains as well as two intermittent lakes (Lakes George and Bathurst).

U3B The Monaro Corridor is a wide depression developed in weaker Silurian sediments between granite batholoths to both east and west. This has been occupied by the Murrumbidgee river and gives easy access from the Southern Tablelands to the high plains of Monaro further south. (See Plate 16).

D. Interior Plains.

Only two small portions of the truly interior plains of New South Wales are included within the Nineteen Counties. These are in the extreme north-west and west, where small tongues of plain land project into
Chapter 1.

the upland country in extremely broad river valleys. In both cases the plains are wholly alluvial and are almost flat. The two sections are marked on the map:—

P1 The plains of the Macquarie and Talbragar Rivers.

P2 The Lachlan Plain.

E. Natural Routes.

Before passing from this discussion of the physiographic regions of the Nineteen Counties, it will be well to note briefly the position of four natural routes two of which have always been of considerable importance. These are:—

i. The Murrurrundi Gap at the eastern end of the Liverpool Range which gives access from the valley of Page's River to the Liverpool Plains on the northern side of the range. At its highest point this route is only slightly more than 2,000 feet high and about 1,000 feet lower than the surrounding peaks. This route was used by the earliest travellers between the Hunter Valley and the Liverpool Plains, and is now used by both the New England Highway and railway.

ii. Pandora's Pass, which was discovered in 1823 by Allan Cunningham, lies at the western end of the Liverpool Range and separates it from the Warrumbungle Range which continues to the north-west. Leading from the headwaters of Coolah Creek it joins the plain and upland country of the interior to the Liverpool Plains and New England Tableland.
Chapter 1.

iii. The Cassilis Gap at the western end of the Merriwa Plateau provides a natural route between the plateau and the upper part of the Talbragar Valley. At present this pass through the Dividing Range is used by a road which is not as yet an important one, but could become an important link between the north-western districts and the industrial centre at Newcastle.

iv. The Marulan Ramp leading from the sandstone plateau to the Southern Tableland is the one important route between south-western New South Wales, Victoria and South Australia, and Sydney. To both north and south there are deep canyons cut by the Wollondilly and Shoalhaven Rivers running approximately north and south and preventing easy east-west communication. At present it is used by both the main southern railway line and the Hume Highway.

In view of the fact that there is a fairly large body of material dealing with the climate, vegetation and soils of New South Wales, it is not proposed to deal with these in the same amount of detail as the physiographic regions. The following sections are designed not so much to give a complete and detailed account of these elements of the environment as to give the salient features of the general picture. This will be supplemented where the need arises in later chapters, and a list of sources of fuller information is included in the Bibliography.
Chapter 1.

II. CLIMATE

The Nineteen Counties, like the remainder of the eastern portion of New South Wales, experience a fairly typical mid-latitude, temperate climate without extremes of heat or cold, or a markedly dry season. In terms of Koppen's climatic classification, the greater part of the Nineteen Counties has a Cfa climate: the humid mesothermal climate with rain in all months and a mild winter. Their western part has a Cfb climate which has a colder winter resulting from greater continentality and higher elevation.

The average annual rainfall is heaviest along the coast and decreases to the west. On the eastern side of the ranges flanking the coast variations in topography produce a very heavy, but strictly localised, orographic rainfall. Thus along the Illawarra scarp there are a number of localities receiving more than 55 inches average annual rainfall: Broger's Creek 76.98", Cordeaux Dam 56.52", Madden's Creek 61.32",
Similar heavy rainfalls are found on the ranges to the north of the Hunter Valley. But these are local and exceptional and the greater part of coastal lands receive something between 30 and 40 inches on the average. The decrease in the amount of the average annual rainfall with distance away from the coast is quite rapid even in so small an area as the Cumberland Plain: at South Head (Port Jackson) it is 45.91 inches per annum, at Parramatta 34.80", and at Penrith 28.18". It is greater on the Blue Mountains (Katoomba 53.55") but then falls off again further west: Lithgow 32.85", Carcoar 29.28", Cowra 22.95". On the whole, the western part of the Nineteen Counties (including the western part of the Hunter Valley but not the Georgiana Highlands) receives an average annual rainfall of between 20 and 30 inches. The rainfall is distributed fairly evenly throughout the year, there being no markedly dry or wet season although in the greater part

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5. All figures quoted in this section, apart from those for Canberra and Sydney's 1950 rainfall, are taken from "Results of Rainfall Observations Made in New South Wales (Bureau of Meteorology, Melbourne, 1948). The statistics given in this cover the period to 1944. The rainfall figures for Canberra and Sydney in 1950, are quoted from the Year Book of the Commonwealth of Australia, No 40 (1954), 28.
Chapter 1.

of the Nineteen Counties there is slightly more rain in the summer six-months than in winter. The reverse is the case in a very narrow strip along the coast (10 miles at its widest) and in the Western Uplands, the Georgiana Highlands and the Southern Tablelands.

In the main, temperatures are moderate throughout the area. At the height of summer temperatures rising above $100^\circ F$ may be experienced but the mean maximum temperature for January reaches $90^\circ$ only in the extreme west of the Nineteen Counties (Cowra, Canowindra and Dubbo) and in most places is in the 70's and 80's with a mean minimum in the 50's and 60's. The mean maximum for July is in the 60's along the coast with a mean minimum in the 40's. In the west it is mostly between $50^\circ$ and $55^\circ$ with a minimum in the 30's. Except on the ranges beyond the Murrumbidgee in the south-west, snow does not lie on the ground for any length of time during the winter though in a cold snap it may fall on the Blue Mountains, in the Bathurst-Orange district and on the Barrington Tops, but in these places it only lasts a day or two.

But all this is expressed in unreal averages.
Chapter 1.

Unreal because the Australian climate, so delightfully dependable in statistics, can be extraordinarily capricious in actual fact. Throughout the whole area of the Nineteen Counties, the relative variability of the annual rainfall (the mean departure of rainfall from the average expressed as a percentage of the average) is nowhere more than 25% yet the actual variations can be quite extreme. Sydney's average annual rainfall (the average of 87 years 1859-1945) is 46.46 inches; in 1888 it received only 23.01 inches (the lowest annual rainfall, and almost exactly 50% of the average) but two years later experienced its second wettest year with 81.42 inches. In its wettest year, 1950, 86.33 inches fell. In 1917 there were 32 consecutive fine days, but in March 1942, 11.05 inches of rain fell in 24 hours. Similar variations are found throughout the area: Canberra has an average annual rainfall of 23.92 inches and extremes of 12.05" (1944) and 43.35" (1950); Dubbo's average annual rainfall is 21.71 inches but it has received as little as 11.31" (1919) and as much as
37.83" (1890). This variation from year to year, and the fact that several abnormal years may succeed each other has had quite an important effect on human activities: Chapter 3 will show how a series of dry seasons in the years 1812-15 played an important part in motivating the settlement of the country to the west of the Blue Mountains and in the vicinity of the Wingecarribee River.

III. VEGETATION AND SOILS.

For the purposes of this thesis it will be sufficient to describe five major plant associations which are found in the Nineteen Counties: rain-forest or brush, mixed eucalypt forest, eucalypt woodland, scrub, and grassland. Of these the eucalypt forest and eucalypt woodland are by far the most widespread and together would occupy the greater part of the area of the Nineteen Counties. The distribution of rain-forest is determined principally by shelter and moisture, but the other associations are fairly closely allied to particular types of soil: the eucalypt forests are found on the

6. A most comprehensive and interesting account of the variations in climate from year to year is given by Elizabeth F. Lawrence in "A Climatic Analysis of New South Wales": Australian Geographer, Vol 3, No. 3 (Nov. 1937), 3-24.
Chapter 1.

light sandy soils of the sandstone country; eucalypt woodlands on heavier clayey soils; grasslands on porous soils derived from granites and limestones, and on ancient lake beds; and scrub on thin, skeletal soils.

The sub-tropical rain-forest or brush is a tall dense forest composed of trees of many genera and families having a continuous tree stratum and a dense canopy which allows only a small amount of light to reach the ground beneath. As a result, the shrub and herb strata are relatively scanty though lianas, epiphytic ferns, orchids, mosses and lichens are common. It is found only in places where there is abundant moisture, shelter from drying westerly winds, and to a certain extent shelter from insolation. Given sufficient protection and moisture the rain-forest seems to be able to develop on almost any kind of soil; it is found on soils derived from the Hawkesbury Sandstone, chocolate Narrabeen shales, and from the rocks of the Upper Coal Measures and Carboniferous. The dark soils of the forest derive their character mainly from the high humus content resulting from the luxuriance of the vegetation and the moist conditions in which it breaks down rapidly. The most important areas of rain forest occur along the
eastern edge of the highlands: on the Illawarra scarp, in the Kurrajong—Mt Tomah—Mt Wilson district, and in the sheltered valleys of the highlands on the northern side of the Hunter Valley. The demand for timber, and especially cedar, has led to the cutting of many of the rain-forest trees so that undisturbed stands are now to be found only in the most inaccessible places, though impoverished remnants of it remain in many areas. The former extent of the rain-forest in Illawarra can be gauged from the presence of cabbage palms in the pastures of many dairy farms. The principal trees in the forest were cedar (Cedrela australis), coachwood (Ceratopetalum apetalum) both valuable timber trees and now scarce, turpentine (Syncarpia laurifolia), sassafras (Doryphora sassafras), the brown beech or flame tree (Cryptocarya glaucescens), the cabbage palm (Livistonia australis), the bangalow palm (Archontophoenix Cunninghamiana), figs (Ficus rubiginosa and F. aspera), and tree ferns (Alsophila australis, Dicksonia antarctica and Todea barbata). The principal lianas are Vitis hypoglaucia, Tecoma australis and species of Marsdenia. To the early settlers, this rain-forest was "vine brush" or "brush", but it should be noted that the name "brush" was applied to any dense forest: Bargo Brush and Wombat
Chapter 1.

Brush were both areas of thick mixed eucalypt forest not rain-forests.

In the mixed eucalypt forests there are two distinct elements: first, the tall trees which give it its name, and second, a suite of under-shrubs and herbs which form the ground cover. (See Plate 17). Though found in many places, grasses are not common and do not form an integral part of the plant association. These forests are found principally on soils which vary from poor sands to fairly rich loams and are derived from Triassic and Permian sandstones, conglomerates and associated shales. These soils are generally fairly highly podsolized, and contain relatively little humus. The soils derived from the Upper Marine Series and Coal Measures are generally darker, richer in plant foods and carry a better type of forest than those whose parent material is a more siliceous sandstone. The trees in the forest vary considerably from place to place, with altitude, soil type and moisture. On the sandstone country immediately north and south of Sydney, the commonest species are the Sydney peppermint (*Eucalyptus piperita*), scribbly gum (*E. haemastoma*), snappy gum (*E. micrantha*) and bloodwood (*E. gummifera*). In the
Chapter 1.

country about the Macdonald River, stringybark
(*E. eugenioides*), grey gum (*E. punctata*), yellow bloodwood (*E. eximia*), and Baker's mallee (*E. Bakeri*) predominate. In higher and wetter areas the mountain ash (*E. Sieberiana*) and blackbutt (*E. pilularis*), are most common. In some places, pure stands of a single species may be found, while in others a wide variety of species may be intermingled. Though eucalypts dominate the forest they are not the only trees present: in the coastal districts the smooth-barked apple (*Angophora lanceolata*), sometimes called the Sydney red gum, is an important member of the association; in the west and the Hunter Valley various cypress pines (*Callitris* spp.) are included in the forest (Plate 18); and in most districts species of the "oaks" (*Casuarina*) are usually present. In the gullies where the soils are generally richer and deeper, and where there is a more abundant water supply some trees more properly belonging in the rain-forest association may be found in the eucalypt forest: turpentine (*Syncarpia laurifolia*) is the most frequently encountered non-eucalypt tree in such situations. The undergrowth includes a wide range of genera and species. Some of the most frequently encountered shrubs are
Chapter 1.

wattles (Acacia spp.), Banksias, Grevilleas, dwarf Casuarinas, bottle brushes (Callistemon spp.) Waratahs (Telopea speciosissima). Lambertias, Hakeas, Boronias, Isopogons, tea-trees (Leptospermum spp.) and grasstrees or black-boys (Xanthorrhoea spp.). As in the case of the trees, a few or a number of types may be found in any particular area depending upon the exposure and moisture of the site.

On heavier clay soils, the typical vegetation is a eucalypt woodland (a savannah woodland) in which the trees are generally more widely spaced, have shorter trunks, and branch more freely than do the forest trees. The intervening spaces are grass-covered (Plate 19). Many species of eucalypt are found in both the forest and woodland associations, but there are nevertheless distinct differences between the two associations. On the Wianamatta Shale soils of the Cumberland Plain the most frequently occurring species are grey box (Eucalyptus hemiphloia), forest red gum (E. Tereticornis), ironbarks (E. siderophloia and E. crebra), cabbage gum (E. amplifolia), and the smooth barked apple (Angophera lanceolata). In the area of clay soils surrounding the Wingecarribee (the Sutton Forest Basin) the dominants
Chapter 1.

are Camden wollybutt (E. Macarthuri), swamp gum (E. ovata), grey peppermint (E. radiata), and the spotted mountain gum (E. goniocalyx). Turpentines may be found in some of the wetter situations, and tea-trees (Melaleuca spp.) and she-oaks (Casuarina spp.) line many of the fresh-water streams: tea-trees where the land is swampy. In the more westerly districts kurrajongs (Brachychiton populneus) and cypress pines (Callitris spp.) are frequently found in the woodland association. Though shrubs are not a usual part of the plant community, occasional clumps of them do occur, Acacias, Bursaria spinosa, Kunzea spp. and Melaleuca spp. being the most common. As some of the native grasses have become extinct in many areas since grazing commenced, it is not easy to be certain of the nature of the original grasses. On the Cumberland Plain they appear to have been principally tufted grasses\(^7\) and it would be reasonable to assume that they included kangaroo grass (Themeda or Anthistiria spp.), wallaby grass (Danthonia spp.), Poa, Andropogon, and spear grasses (Stipa spp.).

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7. See the quotation from Tench's Complete Account... in Footnote 6 to Chapter 2.
Chapter 1.

Themeda was one of the colony's best natural pasture grasses which, because of its attractiveness to stock, has become extinct in many districts.8 The early settlers knew the woodlands as "forest-land" and in their descriptions of them frequently remark on the open, park-like appearance of the country. Peter Cunningham, for instance, describing Eden Forest, a part of the Sutton Forest area, comments that the trees "are so sparingly scattered as to resemble more a nobleman's park than a natural forest...."9

Natural grasslands were found in the Uplands and on the banks of some of the colony's rivers. To the early settlers they were "plains", the name having a vegetational rather than a topographic significance: "These tracts, although termed plains in the Colony, are very seldom level, but generally a gently undulating surface, destitute of timber, and covered with grass...."10

The most extensive areas of grassland within the Nineteen Counties were found in the vicinity of Bathurst

9. Cunningham, *Two Years in New South Wales*, i, 118.
Chapter 1.
(O'Connell, Macquarie, Bathurst and King's Plains), and to the south and west of Goulburn (Goulburn now Gundary, Molonglo, Breadalbane, Limestone and Yass Plains), while smaller areas were found on the delta of the Shoalhaven River, on the Cudgegong near Mudgee, and in the Hunter River Valley (Nelson's, Paterson's, Wallis' and St Patrick's Plains). (See Plates 11 and 15).

There is no very close correlation between soil and vegetation in these areas, although the grasslands are in general found on very light or very heavy soils. In the Bathurst district they are in areas of alluvial or granitic soil, while in the south-west they occur on granite and limestone soils, on Silurian sediments of various kinds and on the beds of ancient lakes. But in all these areas, a woodland vegetation may be found on identical soils. In the Canberra district, for instance, the transition from grassland to woodland is not marked by any significant soil or topographic boundary though it generally occurs in the vicinity of the 2,000-foot contour. The controlling factor may be one of micro-climate or soil drainage but as yet its nature does not

seem to be clearly recognised. It would appear, however, that in some of the grasslands the absence of trees is not due to any condition which prevents their growth: in the Canberra, Goulburn and Bathurst districts, planted trees (both eucalypts and exotics) grow, without apparent difficulty, in areas which were formerly natural grassland. As in the case of the woodlands there seems to be good evidence for believing that the floristic composition of the grasslands has changed since they were first occupied by graziers. The original grassland of the Canberra plains is believed to have been dominated by *Themeda australis* with *Poa caespitosa* in the areas of heavier soils. As result of sheep grazing, however, these grasses are no longer dominant, their place having been taken by *Stipa falcata, Danthonia ariculata* and *D. carphoides*.12 Among the grasses noted in the Cudgegong area by Allan Cunningham in 1822 were *Potamophila parviflora, Danthonia pilosa*, and *Agrostis* and *Anthristiria australis*.13 It would seem likely that

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13. See the extracts from his notes in Ida Lee's Early Explorers in Australia, pp. 496-7.
these species, together with *Themeda*, *Poa* and *Stipa* would have been among the most frequently encountered grasses in the natural grasslands.

Scrub is found in the least attractive places: in areas of thin skeletal soil and exposed situation. Because of this many scrublands, even those quite close to Sydney, are still in an almost virgin state. ("Almost" because the ground litter now includes picnickers' beer bottles and jam tins). They are found principally on the sandstone plateau, both along the coast and inland, where the soil is little more than a few inches of crumbled sandstone and where strong winds (salt-spray laden on the coast) inhibit tree growth. The shrubs of the scrub are closely allied to those of the eucalypt forests on the sandstone, the same species being common to both though the scrub very often includes varieties, especially xerophytes, which are not found in the forest. In general two types of scrub may be distinguished: the "wet" and the "dry". "Wet" scrub is found in those ill-drained areas where the sand remains moist for a considerable time after rain, while the "dry" scrub is found where rapid drainage results in the speedy drying of the soil. The "wet" scrub is
Chapter 1.

generally composed of a smaller number of species than the "dry" scrub and reflects its more favourable situation in their taller growth. The "dry" scrub includes stunted specimens of the species found in the "wet" scrub and in addition possesses a large number of the hardiest sclerophylls. Besides shrubs, herbs and grasses are commonly found in the scrubland. Among the more common shrubs are species of Casuarina, Acacia, Bossiaea, Hakea, Isopogon, Epacris, Banksia, Leptospermum, Peraconia, Dillwynia, Eriostemon, Grevillea and Xanthorrhoea. (This list is by no means exhaustive). In places dwarf, xerophytic eucalypts are found, stunted scribbly gums (E. haemastoma) with a mallee-like habit being the most common. (See Plate 20). Generally speaking the scrublands are decidedly unattractive: most of the shrubs are stunted, twisted, woody and hard leaved, and many are prickly. They do however, produce a profusion of flowers in the spring. Wattle (Acacia spp.) is probably the most conspicuous, but flannel flowers (Actinotus Helianthi), heaths (Epacris spp.), Banksias, Bottle brushes (Callistemon spp.), eggs-and-bacon (Bossiaea spp.), honey flower or mountain devil (Lambertia formosa), Boronias, and
spider flowers (Grevillea spp.) are also notable.

While these four major plant associations account for the greater part of the area of the Nineteen Counties, there are a few others which should be mentioned. On the swampy lands of the coast, the typical vegetation consists of reedy grasses with a scrub of Casuarina glauca where the water is salty, or of tea-tree (Melaleuca spp.) where it is fresh or brackish. Where the ground is merely ill drained, as distinct from swampy, swamp mahogany (Eucalyptus robusta) and Bangalay (E. botryoides) are the dominants in a eucalypt forest with an underbrush of Melaleuca and Banksia. Away from the coast swampy areas generally carry a cover of coarse clump grasses and reeds with any of the several "swamp gums" (Eucalyptus amplifolia, E. ovata, E. Camphora), though trees are not always found in the interior swamps. On coastal sand dunes, the plant succession is one of grasses (Festuca litoralis, Spinifex hirsutus and Carex pumila) and shrubs (Leptospermum laevigatum, Leucopogon Richei and Acacia Sophorae), reaching a climax in a forest of Bangalay and Banksia integrifolia with shrubs surviving from the previous stage.
Chapter 1.

So far this description of the environment has been based on our modern knowledge, but since the early settlers' activities were directed by their knowledge of and beliefs about the country, it will be well to close this chapter by noting briefly their opinions of the land. On the whole, they seem to have had little complaint of the climate. Two years after the establishment of the settlement Governor Phillip wrote: "I believe a finer or more healthy climate is not to be found in any part of the world".\(^{14}\) And thirty-six years later James Atkinson omitted a discussion of climate from his book explaining, "It is unnecessary for me to go into any detail to prove the excellence of the climate of New South Wales, its salubrity being well known and universally admitted."\(^{15}\) John Oxley, who at the time had seen more of the country than most of its inhabitants, told Commissioner Bigge that he thought its climate particularly suited to both agriculture and grazing.\(^{16}\) For agriculture, the alluvial lands of the

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coast were considered best: Atkinson believed them to be "not surpassed by any in the world" and considered that properly managed they would continue to produce "the most plentiful and valuable crops." 17 The sandstone soils were recognised as being "wretchedly poor ... and wholly unimprovable" 18 while some of the forest-land soils, and especially the loamy and basaltic ones were held to be "the finest description in the country, equally well adapted for grazing or for cultivation..." The grasslands were considered to be excellent grazing lands but their soils were not highly esteemed, and the difficulty of clearing made the rain-forest soils, believed to be fertile, unusable without the expenditure of a great deal of labour. 20 In general the advice to immigrant settlers was to settle on the coast — in the Hunter Valley, Illawarra or Shoalhaven — if they intended to be agriculturalists, or to go west of the highlands to Bathurst or Argyle if they planned to raise

18. Ibid., p. 3.
19. Ibid., p. 6.
20. Ibid., pp. 7 and 4.
sheep and cattle. This advice was based not only upon the belief that the alluvial soils were more suited to farming than the lighter drier soils of the interior, but also on the fact that distance and the high cost of transportation would make it impossible for a farmer in the interior to market his crops profitably.  

The forty-one years which passed between 1788 and 1829 saw a number of important changes in the convict colony, not the least important of which was a change of attitude in its population. By 1820 the land was no longer considered a "wretched" one: the increasing numbers of free settlers, the successful breeding of fine-woolled sheep, and the discovery of the vast interior plains replaced despondency with boundless optimism. "What a cheering prospect for the philanthropist to behold what is now one vast and mournful wilderness, becoming the smiling seat of industry and the social arts; to see its hills and dales covered with

Chapter 1.

bleating flocks, lowing herds, and waving corn; to hear the joyful notes of the shepherd, and the enlivening cries of the husbandmen...."22 And in the mind of one man at least, such a state existed by 1827: the Editor of the Sydney Gazette, who took "Advance Australia" as his motto, claimed, with rather more patriotic hyperbole than truth, to behold on the approach of the thirty-ninth anniversary of the founding of the colony, "smiling villages, crowded towns, growing cities, extending settlements, infant Colonies, and thousands upon thousands of the human family who are ramifying themselves in all directions, and attract, by their unparalleled exertions, the notice and admiration of Europe."23 The growth and expansion of the settlement which produced this change of attitude is now our concern.

23. S. G. 22 January 1827.
Chapter 2.

THE SETTLEMENT OF THE CUMBERLAND PLAIN.

When, in January 1788, Captain Arthur Phillip placed his new settlement on the shores of Port Jackson, he was conscious that the site was not really ideal; but it possessed several advantages over Botany Bay, the intended site of the colony, and as expediency demanded that the convicts be landed without delay time could not be spent searching for a more suitable place. To Phillip Port Jackson was "the finest harbour in the world"; Sydney Cove had at its head a small fresh-water creek; and although the surrounding area was rocky and thickly timbered there were several places nearby which appeared arable.¹ This was sufficient. On the evening of January 26th the flag was raised, volleys were fired, and the officers toasted the royal family and the future success of the colony. Then, on 7th February, in the

¹ Phillip - Sydney, 15 May 1788: H.R.A. I, i, 16ff.
presence of the entire population, Phillip read his Commission, took his oaths, and became Captain-General and Governor-in-Chief of New South Wales; the vast unknown land extending from the tiny clearing beside Sydney Cove, through the surrounding timber, and away into the hot blue summer haze.

In the ensuing years the surrounding country became known.\(^2\) It was found that at the head of the harbour there lay a more attractive area, and beyond this, a gently undulating plain extended westward to a river flowing at the foot of the steep scarp of the Blue Mountains. To both the north-east and south-east the plain was edged with foothills fringing highlands as high, and as rugged, as the Blue Mountains themselves. For almost thirty years this plain was the vital centre of the colony: it contained almost the whole of its population, grazed most of its sheep and cattle, and grew all its crops. It was the arena in which a capricious climate baited and harried a handful of outcasts with drought and flood, and the base from which they later marched to grapple with these same problems in the

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2. See Appendix 3: Exploration of Cumberland.
Chapter 2.

interior emptiness of "The Great South Land."

From north to south (Windsor to Appin), the Cumberland Plain measures about forty miles, and from east to west (Parramatta to Penrith), scarcely twenty. At Windsor it is little more than 25 feet above sea-level, but it rises gradually to the south to reach a general level of about 250 feet near Camden. In the north it is relatively flat, but in the south, where ridges and hills rise to upwards of 300 feet, it is an area of gently sloping hills and fairly wide, broad valleys. The plain is underlain by Wianamatta shales (See Map 5) from which its relatively heavy clay and loam soils are derived. The soils are shallow (8 to 10 inches deep) and are underlain by a stiff, yellow clay sub-soil, which combines with the low relief of the plain to result in their being poorly drained. In wet weather they are saturated, while in dry they become desiccated, cracked and intractable. Along the rivers there are several extensive areas of alluvial soil, the most important being on the Nepean at Camden, on the Nepean-Hawkesbury between Penrith and Windsor, on George's River near Liverpool and in a narrow ribbon along South Creek. Most of these alluvial soils, being
NEW SOUTH WALES
THE CUMBERLAND PLAIN

MAJOR GEOLOGICAL
FORMATIONS
(Simplified)

MILES

RECENT: Alluvium, gravel, sand and clay
TERTIARY: Sand, silt and clay
Basalt
TRIASSIC: Wianamatta Shale (and sandstones)
  a) Cumberland Plain
  b) Elevated areas
Hawkesbury Sandstone including small areas of Norahbee Sandstone

Simplified from the Sydney and Wollongong Sheets of the 4 Mile Geological Series (Sheets 156-5a6 and 156-9).

Map 5.
Chapter 2.
composed of material carried from the sandstone country in which the rivers rise, are light sandy loams and fine silts. Within the plain several small basaltic intrusions have weathered to yield rich chocolate-coloured clayey soils, which, because of their high lime content, are more friable than the shale-soils of the plain. The most important of these is at Prospect.³

The original vegetation of most of the plain was an open eucalypt woodland, in which the trees were widely spaced and the ground between grass-covered.⁴ There was very little, or no, undergrowth. To the early colonists this was the "forest" land. They explained that "Forest land is such as abounds with Grass and is the only Ground which is fit to Graze; according to the local distinction, the Grass is the discriminating

³ For a more detailed discussion of soils and vegetation see Ilma M. Pidgeon's series of articles "The Ecology of the Central Coastal Area of New South Wales": L.S.N.P. lxii (1937), 315-340; lxiii (1938), 1-26; lxv (1940), 221-249; and lxvi (1941), 113-137.

⁴ The commonest eucalypts found in the Cumberland Plain "forests" are Eucalyptus hemiphloia (Grey Box), E. tereticornis (Forest Red Gum), E. siderophloia (Ironbark), E. crebra (Narrow-leaved Ironbark), and E. amplifolia (Cabbage Gum). Of these the first two mentioned are the most widespread.
Chapter 2.

Character and not the Trees...." The grass cover was not continuous, however, but grew in isolated tufts. 6

Along the rivers, the "forest" gives way to the "brush" — the modern "mixed eucalypt forest" with a thick scrub undergrowth — while on the sandstone highlands the type of vegetation varied from thick forests approaching the rain-forest type of vegetation in moist, sheltered places, to poor scrubby thickets and heaths on the exposed parts with shallow soils.

On either side of Sydney Cove, low bluffs of golden-coloured Hawkesbury sandstone jutted into Port Jackson, just as they did at the mouth of each of the Port's inlets. Tall "Red Gums" grew in the small valleys running back from each bay, while the ridges between


6. "The grass...does not overspread the land in a continued sward, but arises in small detached tufts, growing every way about three inches apart, the intermediate space being bare: though the heads of the grass are often so luxuriant, as to hide the deficiency on the surface." (Watkin Tench, Complete Account of the Settlement at Port Jackson, p. 164).
Chapter 2.
carried more twisted and less attractive members of the eucalypt family, and scattered amongst the trees of both valleys and ridges were fir-like casuarinas. But the soils in the area near Sydney Cove were all thin and poor; even those on the broad slope behind Farm Cove failed to produce any significant return from the nine acres of corn which were hopefully planted there, and it was not long before the farms which had been made by the officers, as well as the Government farm, were abandoned for want of manure to make good the soil's natural deficiency.

However, at Rose Hill (later given its native name Parramatta) an area of more attractive soil was discovered, and here the colony's first successful attempt

7. See Phillip - Sydney 15 May 1788; H.R.A. I, i, p. 23. The "Red Gums" of the sandstone country are Angophora Lanceolata. The most common eucalypts in the vicinity of Sydney would probably have been E. haemastoma (White Gum), and E. gummifera (Bloodwood). Casuarina torulosa and C. glauca were possibly the most frequently encountered she-oaks.

8. "...the possession of a spade, a wheelbarrow, or a dunghill, was more coveted than the most refulgent arms in which heroism ever dazzled...experience proved to us that the soil would produce neither [grain or vegetables] without manure, and as this was not to be procured our vigour soon slackened, and most of the farms (amongst which was the one belonging to the government) were successively abandoned." (Tench, Complete Account, p. 23).
at cultivation was made in 1789 under the superintendence of Edward Dodd. In December of the same year, the pioneer farmer, James Ruse, was put in possession of a farm nearby. The clay soil of Parramatta was a deal better than the thin sand of Sydney but it was realised that without manuring it too would return little for the labour expended in farming it. Ruse told Tench, "My opinion of the soil of my farm is that it is middling - neither good nor bad. I will be bound to make it do with manure, but without cattle it will fail." 9 Tench, himself, did not expect much of any of the colony's soils:

"Of the soil, opinions have not differed widely. A spot eminently fruitful has never been discovered. That there are many spots cursed with everlasting and unconquerable sterility no one, who has seen the country, will deny. At the same time I am decidedly of opinion, that many large tracts of land, between Rose Hill and the Hawkesbury, even now, are of a nature sufficiently favourable to produce moderate crops of whatever may be sown in them. And provided a sufficient number of cattle be imported to afford manure for dressing the ground, no doubt can exist, that subsistence for a limited number of inhabitants may be drawn from it." 10

10. Tench, Complete Account, p. 163.
Chapter 2.

Phillip recognised the value of the alluvial soils on the Hawkesbury, but hesitated to settle the area for want of suitable people to take charge and of small craft to convey produce to Sydney, and also because he was convinced that for a time it would be undesirable to disperse his people too widely. In 1791, therefore, when the first convicts who had served their sentences were granted farms, they were all located near Parramatta in places where local variations in topography produced slightly better soils than were general on the Cumberland Plain. By the time Phillip left the colony in 1792, more than sixty-eight settlers had been placed on small farms, each of twenty-five or thirty acres, in six separate clusters. These were at Parramatta, Prospect Hill, Kissing Point, the Northern Boundary, the Ponds, and the Field of Mars. In the following two years, farms were established at Toongabbie, Liberty Plains, Concord, Bulanaming and Petersham. (See Map 6). These groups of farms grew


12. See returns of lands granted and cultivated in H.R.A. I, i, 279-82, 401-3 and 472-3. Several grants were made between the time of the last of these returns and Phillip's departure for England.
NEW SOUTH WALES
THE SETTLED AREAS 1796

Adapted from a "Plan of the Settlements in New South Wales by C. Grimes, Deputy Surveyor General 1796" as published in Volume 3 of the Historical Records of N.S.W. The Hawkesbury settlement is not shown.

Map 6.
steadily in the succeeding years, and though the methods of husbandry were crude and the farmers were handicapped by their own lack of farming experience, crops were so good that by 1794 Lieutenant-Governor Grose was able to report that "the publick and private farms had yielded in such abundance as to secure us from any other distress than that of being forced to live on bread only."¹³

The year 1794, also marked the beginning of the second phase of the settlement of the Cumberland Plain: the establishment of farms on the alluvial soils along the Hawkesbury River. The first twenty-two settlers placed there found the soil to be particularly rich and their crops showed the "greatest luxuriance."¹⁴ Tench¹⁵ had considered the cultivation of these lands impossible.

¹³ Grose - Dundas, 29 April 1794: H.R.A. I, i, 468.
¹⁵ "To cultivate its banks within many miles of the bed of the stream (except on some elevated detached spots) will be found impracticable, unless some method be devised of erecting a mound, sufficient to repel the encroachments of a torrent, which sometimes rises fifty feet above its ordinary level, inundating the country in every direction." (Tench, Complete Account, pp. 160-1).
Chapter 2.

because of the flooding of the river, and the first settlers themselves had apparently been fearful of floods, but although there were heavy rains during the year, the river rose only slightly, and the settlement of the flats proceeded apace. By August there were seventy settlers there and a good road had been made from Sydney to the Hawkesbury settlement, which in June 1795 contained more than 500 persons. But in the latter part of that year heavy rain resulted in the river rising more than 25 feet above its usual level, some farms were flooded, and one unlucky person was drowned. Paterson reflected "I much fear that it would be the utmost imprudence to place any dependance on that settlement as a resource...." The settlers were alarmed and some offered to return their farms to the Crown, but the soil was "uncommonly fertile" and not only did most of the old settlers return to their farms, but new ones did not hesitate to occupy land on the

banks of the river. In 1798, the settlement of the alluvial lands was carried a stage further with the establishment of farms on the flats of George's River near Banks Town. About the same time, Governor Hunter placed some of the hills at Toongabbie under cultivation. Previous cultivation in this district had been confined to the land on either side of small creeks, where the predominantly clay soils had some alluvial material incorporated in them. The hills which had been represented to be useless for cultivation bore a luxuriant first crop, but this was not followed by any great cultivation of other hill lands.

Thus far, the outstanding feature of the settlement of the Cumberland Plain had been the occupation of isolated areas of attractive soil. Of these, the alluvial soils of the Hawkesbury and George's Rivers and

20. "...I was enabled to put the Hills at Toongabbie (which it had been attempted to make me believe good for nothing) into cultivation this last year, & I never saw in any Country a crop of that extent (about 300 acres) more heavy & luxuriant...." Hunter - Banks, 12 March 1798 (Letters of Governor Hunter 1795-1802, p. 48: M.L. A 1787).
Chapter 2.

the basaltic soil of Prospect Hill were the richest and maintained their fertility under cultivation, but the soils in most of the other areas soon became exhausted under the system of continuous cultivation practised on the small farms many of which were abandoned when they no longer gave worthwhile returns. The first farms in these districts had been placed to take advantage of small pockets of soils superior to the typically clay soils of the plain: some were located on patches of alluvium, or in areas at the junction of the shale and sandstone where the soils were not as heavy and intractable as the soils derived from the shale nor as light and porous as those developed on the sandstone. But the farms which were later added to these clusters were placed with little reference to the quality of the soil and included much clay land, which, while producing good initial crops, soon became exhausted and could not be cultivated continually. When Governor Hunter arrived

22. "A great number are settled on farms without any means being adopted to ascertain the quality of the soil that is to be cultivated, the consequence of which is, that after a year's labour has been expended it is discovered there is no prospect of such land ever supporting its owner." Macarthur - Portland, 15 September 1796: H.R.A. I, ii, 92.
Chapter 2.

in the colony, he had found that much land which had formerly been cultivated was "from its bad quality and exhausted state not now capable of paying the expense of cultivation; it will scarcely return the seed expended upon it, until it has been allowed to lay some time fallow."\(^{23}\) The infertility and rapid exhaustion of the clay soils was not, however, the only cause of the abandonment of many farms, or of the bankruptcy of most of the small farmers. The ex-convict's lack of capital, inability to obtain numbers of convict labourers or to employ free men, ignorance of agriculture, indolent habits, and addiction to rum contributed to his ruin. The precarious income resulting from a fluctuating market and the occasional difficulty of selling grain to the commissariat, together with the extortionate prices charged for provisions and clothing contributed to the ruin of small farmers not only on the clay lands but also on the richer soils.\(^{24}\) As holdings were abandoned

\(^{23}\) Hunter - Portland, 28 April 1796: H.R.A. I, i, 558.

\(^{24}\) For a discussion of the small farmers' plight see: Hunter - Portland, 20 August 1796, 2 March 1798 and enclosures, and 1 February 1801: H.R.A. I, i, 591-6; ii, 135-46; and 440-50. Also C. J. King, "The Travesty of Small Land Settlement within a Monopoly Environment (1792-1810)"; Review of Marketing and Agricultural Economics, xvi (1948), 433-57.
Chapter 2.

by small farmers, they were frequently incorporated into the estates of the merchants, free settlers, or officers of the N.S.W. Corps, while the unfortunate farmers either occupied new farms or worked for wages on the farms of the more affluent. By 1801, the farms on the alluvial soils of the Hawkesbury-Nepean had become the major source of colonial grain, these soils regularly producing 25, and sometimes as much as 35, bushels of wheat per acre, while the clay soils produced only from 12 to 14 bushels.

By 1804, the greater part of the land in the more favoured parts of the Cumberland Plain had been

25. "The chief of the farms in the districts of the Ponds and Northern Boundaries consisting generally of Thirty acres each, were not worked for many years and have since been purchased by larger capitalists who are now working them on a better system." (Wm Cox's Evidence before Commissioner Bigge: B.T. 5, p. 1945). Cox pointed out to Bigge that the larger farmers were able to use these districts profitably because they were able to grow artificial feed for animals whose manure could be used to raise the fertility of the soil. G. T. Palmer, whose estate near Parramatta consisted of a number of small farms which had been abandoned, told Bigge that he was obtaining about 12 bushels of wheat per acre from this land. (G. T. Palmer's Evidence before Commissioner Bigge, B.T. 5, pp. 2159-96.

occupied, and Governor King fearing a shortage of arable land began to look beyond the Cumberland Plain for new areas for settlement. About the same time George Caley, Sir Joseph Banks' botanist who had travelled extensively through the plain, warned that the area suitable for cultivation and grazing was not as extensive as was generally imagined and that greater care should be taken in the disposal of land. (The only attractive part of the Cumberland Plain not occupied at this time was the Cow Pastures at its southwestern corner. This area was reserved for the Wild Cattle, the progeny of a small herd which had escaped from Sydney during the colony's earliest years, and to

27. See Chapter 3.
28. "It having sometime ago appeared to me, that the land fit for cultivation and grazing, was not of that extent as what was generally imagined. On the contrary I considered it as but small, and that if the inhabitants increased at no greater rate than they had hitherto done, the whole would be occupied in the course of twenty or thirty years.... Grants of land to a large amount, ought not to be given without being coolly and deliberately considered. Grants of a small amount should not be given to such people as are likely to sell or make away with them in a short time, for they generally fall into the hands of those that are accumulating large masses." Quoted from Caley - Banks, 14 June 1805 (in the British Museum), by H. A. MacLeod Morgan, R.A.H.S.J. xli (1955) 79.
Chapter 2.
protect them from molestation, no settlement was permit-
ted in or near the Cow Pastures.) Before King had made
any move to establish an agricultural settlement out-
side the Cumberland Plain, however, he was recalled to
England and the question of new areas for settlement did
not arise again until late in Governor Macquarie's
administration. In the meantime, the occupation of the
"forest-lands" removed the necessity of settling remote
areas.

The third stage in the settlement of the
Cumberland Plain commenced in 1809 when Lieutenant-
Governor Paterson decided to attempt the cultivation of
the "forest-lands". From the time of their establishment,
the farms on the Hawkesbury had been subject to recurrent
flooding, and the consequent losses of crops and live-
stock were important factors contributing to the colony's
precarious food supply, its wildly fluctuating market and
its unstable economy. Following a flood in May 1809,
which destroyed almost the whole of the grain from the
preceding harvest, and a second flood in August which
destroyed the growing crop on which the colony was de-
pending, the settlement relied on the expected arrival of
wheat from India and Rio de Janeiro to avert
Chapter 2.

famine. Under these circumstances Paterson felt that it was no longer prudent to rely on the areas subject to flooding as the Colony's major source of grain, and began to place settlers on the "forest lands" - the areas of open forest on the Wianamatta shale soil. Paterson's first grants of forest land were given in the areas to the west and south of Parramatta: mostly in the Cabramatta-Minto district, with some extending further west to the Nepean in the districts of Evan, Bringelly and Cooke, and south to Airds and Appin.


30. "Melancholy experience having now fully proved the imprudence of depending on the Settlements lying on the banks of the rivers as the principle (sic) source of our supplies of grain, I have thought it my duty to give every possible encouragement to the cultivation of the forest lands, and have, therefore, made a considerable number of grants to such persons as, from their good characters and habits of industry, I judged deserving of such indulgences, and to those Settlers who expressed a desire of relinquishing their farms on the rivers in exchange for others not liable to the same destructive accident...." (Paterson - Castlereagh, 14 October 1809: H.R.A. I, vii, 174).

31. All Paterson's grants were recalled and later re-issued by Governor Macquarie. See returns in H.R.A. I, vii, 304-313 and 436-439. The boundaries of the various districts are shown on Map 15.
Chapter 2.

In these areas, slightly greater relief results in the soils being better drained than in the northern part of the plain, while many of the creeks are lined by narrow ribbons of alluvial soil. When Macquarie assumed the governorship he continued the settlement of these areas and by the end of his administration almost the whole of the south-western portion of the Cumberland Plain (with the exception of the Cow Pastures) had been occupied.

Neither Paterson nor Macquarie settled large numbers of ex-convicts in these areas. Both were prevented by their instructions from giving large grants to emancipists, and both probably realized that with limited resources small farmers would be unable to cultivate the clay soils successfully. The small farms that were granted in the south-western forest-land districts were all placed on creeks or near rivers where there would have been areas of alluvial soils. The greater number of grants in these districts were large and many of them were given to persons who were already well known as graziers or pastoralists, or to persons who intended devoting themselves to stock raising as well as to agriculture.32 The natural pasturage

32. For a discussion of the size of the forest land grants see Appendix 4.
Chapter 2.

afforded by the forest-lands led naturally enough to the
development of these areas as important grazing and
pastoral lands, but while these activities were dominant
during the first years of settlement, agriculture also
developed slowly. By 1819-20, many of the large proper-
ties included fairly extensive areas under cultivation,
and while the alluvial lands of the Hawkesbury remained
the colony's major source of grain, the contribution
from the forest lands was by no means negligible. 33 By

33. The forest lands cannot be dismissed as being areas
of no cultivation. K. W. Robinson asserts that
"Away from the rivers the amount of cultivation
dwinded rapidly. In extensive tracts of large
holdings - for example, much of the Bringelly,
Cooke and Airds districts - there was practically
no cultivation at all. Here grazing was conducted
on uncleared land, without improved pastures and
rarely in conjunction with cultivation." (N.Z.
Geogr. ix (1953), 155). Evidence presented before
Commissioner Bigge disproves this statement. John
Oxley, Surveyor-General and breeder of one of the
colony's finest herds of cattle, had 200 of the
1,000 acres in his "Kirkham" property under culti-
vation: Charles Throsby of "Glenfield", a 900 acre
estate, cultivated 100 acres and had 25 acres plan-
ted with clover and rye grass: Gregory Blaxland,
long regarded as the prime exemplar of the non-
cultivating grazier, who possibly held more exten-
sive holdings of forest land than anyone else, was
able to discuss the merits of various types of wheat
with Bigge and give a preference for the hard wheats
of the warmer countries rather than the soft English
wheats. (See evidence of P. Hart, C. Throsby and G.
Blaxland, B.T. 5, pp. 2279-2299, 2212-2223 and
2084-2113). See also Appendix 4.
Chapter 2.

1825, the proportion of land cultivated in the forest-land was comparable with that in any of the Cumberland Plain districts.\(^34\)

During Macquarie's governorship, the greater part of the forest-lands were occupied, and the remaining portions of land on the Hawkesbury and George's Rivers and in the vicinities of Sydney and Parramatta were granted. At the end of his administration, the Cow Pastures remained the only portion of the Cumberland Plain that was not fully occupied. John Macarthur had succeeded in obtaining a portion of them for his sheep in 1804, and had from that time been their only occupant. Governor Brisbane, however, granted them away once the impossibility of taming or capturing the wild cattle had been established, the greater part going to Macarthur and his sons. Although Macquarie had been concerned during the latter part of his governorship to find areas in which new settlers could be placed, the Cumberland Plain was able to accommodate settlers, or at least those settlers whose needs were modest, until 1823. In September of that year

\(^{34}\) See Appendix 4.
Chapter 2.

Surveyor-General Oxley instructed one of his Assistant Surveyors to inform inquirers that no lands remained for settlers in Cumberland.\(^{35}\)

The thirty-five years which had elapsed since Phillip planted Sydney on the rocky shores of Port Jackson had seen the complete occupation of the Cumberland Plain in three distinct phases:

First, in the period 1788 to 1794, the occupation of small areas of attractive soils in the vicinity of Parramatta.

Second, in the years 1794 to 1809, the enlargement of these clusters, and, more important, the settlement of the alluvial soils on the Nepean-Hawkesbury and George's Rivers. During this period, the alluvial soils became the major grain producing areas in the colony while the poorer soils near Parramatta became exhausted by continual cropping and were, in places, abandoned.

Third, from 1809 to 1823, the settlement of the forest-lands - the greater part of the Cumberland Plain with predominantly clay soils derived from the Wianamatta shales. In this phase, the Nepean-Hawkesbury area remained the principal area of grain supply; the abandoned small farms near Parramatta were consolidated into larger estates, and these together with the newly established farms in the forest-land districts developed as crop and animal farms.

\(^{35}\) Oxley - Cavanagh, 26 September 1823 : C.S.I.L. John Oxley 1810-1826, p. 95.
Chapter 2.

After 1823, newly arrived settlers and recently emancipated convicts who could not buy Cumberland properties had to establish themselves in the areas of new settlement west of the Blue Mountains at Bathurst, in the Hunter River Valley, on the Illawarra coastal plain, or on the southern highlands.
Chapter 3.

THE SPREAD OF SETTLEMENT BEYOND

CUMBERLAND

I. THE GRAZING EXPANSION.

On the western side of the Cumberland Plain, the scarp of the Blue Mountain Plateau rises abruptly from the bank of the Nepean River. Capped with Hawkesbury Sandstone, the plateau presents a flat almost level sky-line from a distance, but it is deeply dissected by the rivers which have cut canyons through it, and though the valleys are fairly wide, and their lower slopes gentle, their upper slopes culminate in sheer cliffs hundreds of feet high in some places.

Governor Phillip gave the mountains their first name in 1788, while he was exploring the country to the west of the harbour. Looking from a hill (probably Prospect Hill), he named the section to the north of the Grose River "Carmarthen Hills," and that
to the south, "Landsdowne Hills." But these names soon fell into disuse, for the haze that veiled the mountains suggested a more appropriate and lasting name. Curiosity and the search for better soils naturally led to attempts to cross them, the first being made by Lieutenant Dawes in December 1789, but the sheer cliffs and the maze of canyons defeated all the early attempts to make a crossing. One by one, the best known of Australia's early explorers, William Paterson (1793), Henry Hacking (1794), George Bass (1796), Francis Barrallier (1802), and George Caley (1804-6), returned to the settled areas to testify the impossibility of penetrating these ranges. The general conclusion was "that this formidable barrier is impassable to man." Were it not for the existence of such insurmountable obstacles, is it to be supposed that persons who have resided above twenty years within sight of this Alpine chain of hills ... would so long

2. See Appendix 5: Attempts to Cross the Blue Mountains.
have remained ignorant of the space on the other side...

In the same way as the mountains drew a dark blue line on the Cumberland Plain horizon, so too they seemed to limit the future of the colony. In 1812, a House of Commons Committee drily remarked that:

"The settlement of New South Wales is bounded on the north, west and south by a ridge of hills known by the name of the Blue Mountains beyond which no one has yet been able to penetrate the country; ... beyond these, it is stated, that the colony will not be capable of extension...."

The limitation placed on the expansion of settlement by the highlands surrounding the Cumberland Plain, the fact that New South Wales possessed no merchantable raw materials of any consequence, and the great cost of maintaining the colony caused some concern in London, so that the advisability of maintaining the colony was

5. House of Commons Select Committee on Transportation, *Report 1812*, p. 3.
Chapter 3.

questioned.  

But while the mountains effectively limited the colony's prospects of expansion, they provided no barrier, but rather a stimulus, to flights of fancy. The untutored convicts held many strange ideas of what lay beyond. Some believed that China lay at no great distance to the north, but the most popular belief was that somewhere to the south-west, and not more than three or four hundred miles away, there was a colony of white people "in which they were assured of finding all the comforts of life, without the necessity of labouring for them." Such beliefs led to a number of ill-fated attempts to escape from the penal settlement and gain the supposed Elysium, but these ideas were only slightly more fantastic than the grandiose speculations that

6. See for example Patrick Colquhoun's Treatise on the Police of the Metropolis (1796 and later editions) in which a restricted transportation policy is advocated, and his Treatise on the Wealth, Power and Resources of the British Empire (2nd ed, 1815), which deplores the "impolicy of establishing a settlement in this distant region of the world." (p. 419).


8. Collins, Account, ii, p. 75. See also S.G. 3 July 1803.
Chapter 3.

exercised the minds of the "well informed" after the mountains had been crossed. 9

The situation which eventually led to the crossing of the mountains was not one of land shortage on the Cumberland Plain, but a loss of carrying capacity on the plain which forced the graziers to find new areas in which to pasture their stock. Two factors contributed to their necessity: first, a gradual deterioration of the natural pastures on the plain as result of their

9. See, for example, W.C. Wentworth's Description of the Colony of New South Wales (2nd ed, 1820, pp. 100-18), in which the newly discovered Macquarie River, is compared with the other "rivers of the first magnitude" (which all flow from west to east or from east to west) the St Lawrence, Oronoko, Amazon, Niger, Senegal, Gambia, Danube, Elbe, Hoang Ho and Kiang Keou) none of which will bear comparison with this new river, if, as supposed, it empties into the sea on the north-west coast of Australia. "What was the reason why Egypt was for so many centuries the seat of affluence and power, but the Nile? that India is still rich and populous, but the Indus and Ganges".

The idea of a great river was taken up by "A Retired Officer" (T.G. Maslen) who, in The Friend of Australia, advanced a grandiose scheme for exploring the interior and even provided a map of the supposed river whose tributaries drained the whole eastern half of the continent west of the divide, and whose mouth lay on the north-west coast in approximately the position of the mouth of the Fitzroy River.
Chapter 3.

being grazed (and in many places, overstocked): and second, and more importantly, a series of drought years and plagues of caterpillars.

The most important of the natural pasture grasses on the Cumberland Plain was known as "oat grass". (It was probably one of the Themeda species). Although the pastures in their virgin state appeared luxuriant, after being grazed for a time they deteriorated rapidly; the oat grass failed to regenerate and was replaced by coarser and more wiry grasses. On the more heavily grazed areas, this deterioration had become evident by about 1810, and by 1819 or 1820, the oat grass had nearly disappeared from the long-grazed districts. Describing the deterioration of the pastures on the Camden estate Sir William McArthur wrote many years later:

10. Asked by Commissioner Bigge to name the best natural grasses, Gregory Blaxland replied, "The best is oat grass, but which I have observed of late years has failed as a feeding grass.... Where much stock has been kept, the oat grass has nearly disappeared, and a new and inferior has appeared...." (Evidence, B.T. 5, pp. 2084-2113). See also Blaxland's "Narrative Relating to the First Expedition..." (B.T. 20, pp. 3271-6) and an unsigned letter dated 15 February/in the Agriculture MSS (M.L. A1280), p. 5.
Chapter 3.

"The land, naturally all forest and broken into short hill and dale, had become crowded - choked up in many places by thickets of saplings and large thorn bushes (bursaria spinosa) and the sweet natural herbage had for the most part been replaced by coarse wiry grasses which grew uncropped and some of them produced numerous barbed seeds - These penetrated the fleeces and skins of the poor animals and caused perpetual irritation and kicking." 11

The deterioration of the natural pastures of the Cumberland Plain was a long-continuing process increasing in importance as time passed, but the vital cause of the graziers' need to obtain new pastures lay in the occurrence of drought and plague, which caused several of them to undertake explorations in search of new pastures. These explorations resulted, not only in the crossing of the Blue Mountains, but in the finding of a number of routes across the Hawkesbury sandstone highlands encircling the Cumberland Plain and into the more attractive areas lying beyond them to the west,

11. Sir William McArthur to Mr. T. L. Learmonth, 6th April, 1866. (Copy made available to the author by Miss Margaret Kiddle of the University of Melbourne).
Chapter 3.

south-west and south-east. 12

Apparently the first to feel the need for pasturage outside Cumberland was Gregory Blaxland, one of the colony's most prominent graziers. According to accounts 13 written some time after the crossing of the mountains, Blaxland began his search for new land by exploring the country to the west and south of the Cow

12. The most important of these routes were those discovered by Charles Throsby to Illawarra in 1815 and to the Wingecarribee in 1817, Bell's road from Windsor to the Vale of Clwydd discovered in 1823 and John Howe's discovery of the Windsor-Patrick's Plains route in 1819.

13. Blaxland produced three separate accounts of his motives in undertaking an attempt to cross the Blue Mountains. The first was addressed to Sir Joseph Banks in November 1816 (British Museum MS 8953 or 8958: published in the Sydney Morning Herald 5th January 1926); the second, "A Narrative Relating to the First Expedition over the Blue Mountains in New South Wales containing the Motives which first Enduced Mr. G. Blaxland to Undertake it in the Year 1813", was addressed to Commissioner Bigge in November 1819 (B.T. 20, pp. 3269-3304); and the third was contained in a letter to John Oxley Parker dated 10 February 1823 (published with his journal). A Journal of a Tour of Discovery across the Blue Mountains in the Year 1813, by Gregory Blaxland was first published in London in 1823. It was reprinted, with references and explanatory notes by Frank Walker in Sydney in 1913.
Chapter 3.
Pastures in the summer of 1810-11. His experiences on this occasion suggested to him the idea of attempting a crossing by travelling up one of the ridges and then across the surface of the plateau; the method by which he, in company with William Lawson and William Charles Wentworth, successfully crossed the mountains in May 1813. From Blaxland's 1819 Narrative it appears that his early attempts to cross the mountains were made "fully convinced of the necessity of finding out a further extension of pasturage..." and if new grazing lands were his objective in 1810, the years 1811 and 1812 would certainly not have lessened his zeal. Following a caterpillar plague in the spring of 1810, came a dry summer occasioning the loss of the maize crop and a severe shortage of water in Sydney. The spring of 1811

14. In the 1816 letter to Banks, Blaxland states that his first attempt was made "about two years and a half before I set out on the expedition in which we succeeded". The successful crossing was made in May 1813, so the first attempt would have been in the summer of 1810-11. The 1819 "Narrative" in addition to dating the first attempt two and a half years before the crossing, mentions a caterpillar plague as one of the circumstances giving rise to his need of new pasturage. In September 1810, a plague of caterpillars caused extensive damage to crops and pastures near the Hawkesbury (S.G. 29th September 1810). Blaxland's run was situated between the Hawkesbury and South Creek.
Chapter 3.
brought with it an "intense drought" while the rains which fell in mid-February 1812 brought out swarms of caterpillars which did considerable damage to the pastures. The dry 1812-13 season following would have left the stock in a poor state and added a further incentive, if any were needed, for Blaxland to find new pastures.\(^\text{15}\)

Apart from these unfortunate circumstances which must have afflicted all the colony's graziers, Blaxland suffered another grievance. Unlike many others in the colony, he was unable to obtain additional land from Governor Macquarie. He was unable to prove, to the Governor's satisfaction, his need for land, or indeed, that he was using his already extensive holdings to the best advantage. There was no shortage of land in the colony at this time, but Blaxland tended to be somewhat unreasonable in his demands, which, together with his fiery temper, resulted in his relations with Macquarie.

\(^{15}\) See Appendix 6, The Seasons 1810-1820, in which the sources used in compiling the account of seasonal conditions given in this chapter are indicated; and Appendix 7, Caterpillars.
Chapter 3.

being strained and in his inability to obtain the land he desired. 16

There has been a suggestion that Lawson, not Blaxland, was the leader of the 1813 expedition 17 and whatever the merits of this claim, it is clear that Lawson was not a disinterested party in the search for new pasturage, and neither was Wentworth, for both owned stock, and both would have been anxious to discover areas which were not suffering the effects of drought and caterpillars. 18  The important point is that

16. Blaxland had come to New South Wales in 1806 as one of those settlers of "responsibility and Capital" whose "Examples of Industry and Cultivation" were expected to "contribute in an essential degree to the benefit and prosperity of the Colony." (H.R.A. I, v, 490). On arrival, he availed himself of all the liberal assistance the government afforded him, but devoted himself to stockraising rather than agriculture, thus incurring the displeasure of both Bligh and Macquarie. Bligh considered that he seemed to "care for nothing but making money" and that he was "very discontented with what Government has granted him, although it is in itself a Fortune" (H.R.A. I, vi, 149). Macquarie listed him among "the most discontented, unreasonable, and troublesome persons in the whole country" (H.R.A. I, vii, 560).


18. See inter alia Returns in H.R.A. I, vi, 162-76; and vii, 628.
Chapter 3.

the expedition was undertaken at a time when the pastures of the Cumberland Plain were in a very poor condition, and that its three principals had an interest in the grazing industry and would therefore be interested in finding new pasturage.

The crossing of the mountains was not followed by any immediate, or large scale, occupation of the western country, which Macquarie (punningly?) proposed to call "West-more-land." First, Macquarie sent Assistant Surveyor G. W. Evans to follow Blaxland's route and push further west, then he had a road constructed, and while awaiting instructions from England, settled ten small farmers at Bathurst to try the agricultural potential of the area. (The details of the settlement of the western country are discussed in Chapter 6). Meanwhile, no grants of land in Westmoreland would be made, though "gentlemen, or other respectable free persons" could visit the area provided they obtained permission from the Governor. A military guard was

posted on the road to see that no unauthorised persons passed over it. 20

As large areas of the Cumberland Plain were still unalienated Macquarie's decision not to allow the immediate occupation of the western country need not have caused any inconvenience, had not the years 1813, 1814 and 1815 been ones of unprecedented drought in which the graziers became anxious to move their stock from Cumberland.

Following the dry summer of 1812-13, came a dry winter and spring, and a drier summer. The wheat harvest yielded about 8 bushels per acre instead of the usual 15 to 20, while the drying of ponds and rivers caused great losses of stock. A few days' rain gave hopes of an abundant maize crop, but these were dashed and in mid-January 1814, Macquarie reported that "all Vegetation is again at a Stand, The Ponds and Streams again Exhausted, and the Cattle once more Sickening and dying from Actual Want of Food and Water." 21 In March,

Chapter 3.
caterpillars made their appearance, and in October the colony was still experiencing dry conditions: the wheat was flagging and suffering the year's second caterpillar plague, while the Sydney Gazette reported that "the grazing stock are hourly falling off from the poverty of the pastures." At the end of the year rains brought relief to the stock and a better harvest than had been expected, but by July 1815, the stock were again in poor condition as result of dry weather which continued into the spring and early summer and again caused a very inadequate harvest and heavy mortality in the flocks and herds. The drought broke in December, but the stock were slow to recover, and in April 1816 Macquarie declined to receive applications for stock before June 1817 because of "the reduced state of the Government Herds in consequence of the long continued droughts." In these years, the actual losses of stock were considerable. Previously, droughts and floods had taken a toll of the flocks and herds but had not checked the steady

22. For details of seasonal conditions see Appendix 6.
23. G.G.O. 27 April 1816.
Chapter 3.

increase in their numbers. In these years, however, there was a significant decrease in the numbers of both cattle and sheep. Between the muster of 1814 and 1816, the number of cattle was reduced from 26,501 to 25,116, and the sheep population fell from 74,825 to 55,097.24

In these circumstances, the graziers, naturally enough, made efforts to obtain new pastures. Some took their stock to the Cow Pastures, hitherto the exclusive domain of the herds of wild cattle and of John Macarthur's sheep, and so incurred the Governor's displeasure. An order published in 1812 had prohibited persons grazing stock or building stockyards on the Cow Pastures, and following the violation of this order in 1815, the trespassers were given one month in which to withdraw their stock after which they ran the risk of prosecution and of having their stock impounded.25 Others took their stock down a newly-discovered, precipitous pass to the Illawarra coastal plain, where the effects of the drought were not so severe as in Cumberland. Several herds were taken south-westwards

24. See Appendix 8, Number of Cattle and Sheep in New South Wales.
Chapter 3.

beyond the Cow Pastures and grazed at Bargo, while one herd was taken through the Bargo Brush to the Wingecarribee River. In 1815, some herds of the Government cattle were sent to Bathurst, and "several of the great Stock-Holders in the Colony" were given permission to pasture their stock there temporarily. In terms of numbers of both stock and population, this first settlement of the western, south-western, and Illawarra districts was slight, but it was the commencement of the occupation of these areas, and came not, as has been often inferred, as the result of any shortage of land for settlement on the Cumberland Plain, but as the result of the plain being unable to support stock through the adventitious circumstances of drought and plague. In the succeeding years the settlement of these areas proceeded, but the movement into them was still motivated principally by the loss of the stock carrying capacity of the Cumberland Plain.

The years 1817 and 1818 brought more normal

26. For a discussion of the settlement of Westmoreland, the south-western country and Illawarra, see Chapters 6, 7 and 8.
conditions. There were some heavy rains followed by slight flooding on the Hawkesbury, but the harvest of 1817 was "luxuriant and abundant" and the dreaded caterpillars failed to appear. The graziers, however, continued their search for pastures: the south-western districts were explored and a few promises of grants of land there were made, but considerable controversy on the quality of this area led Macquarie to decline making too many grants until it had been surveyed and the quantity of good land assessed. He did make a number of grants of land in Illawarra, but continued to reserve the western districts for a carefully regulated development, allowing only a few of the colony's most respectable graziers temporary pasturage near Bathurst.

The summer of 1818-19 was accompanied by a recurrence of drought. The crops were withered by the heat when in February torrential rains fell causing flooding on the Hawkesbury and South Creek with the attendant loss of crops in the ground (maize and potatoes) and wheat in the stack. Then, as the pastures recovered and promised an abundance of winter feed, the caterpillars appeared in greater numbers than ever before, and the Sydney Gazette reported that in some
Chapter 3.

districts not a blade of grass was to be seen in miles. In May many graziers published notices in the *Gazette* threatening prosecution of the owners of stock trespassing on their estates and the impounding of such stock. Several explained that this action was necessitated by the scarcity of grass resulting from the depredations of the caterpillars. The spring and early summer were dry and the stock were losing condition rapidly. Notices warning trespassers off some of the large estates appeared in the *Gazette* again in October, but by this time the stock were in so poor a condition that the Commissariat was having trouble in maintaining the meat supply. In September, Deputy Commissary-General Drennan had informed Macquarie that many persons were failing to meet their contracts for the supply of meat to the Stores "alleging generally as a reason for the nonfulfillment of them the bad condition of their stock arising from the late devastation committed by the caterpillar on the pasture lands."27 The contracts for the supply of meat were in terms of pounds of meat, not head of stock, although live beasts were received at the

store and slaughtered there; thus in meeting their contracts the graziers stood to lose a far greater number of cattle in supplying the stipulated quantity of meat than they would have anticipated when they made the contract. From the end of October, contractors for the supply of meat were required to enter into a bond to ensure the delivery of meat, but by December the position had become so bad that the meat ration was reduced and an increased allowance of dry provisions issued to make good the deficit. The reason given for this action was "The Difficulty of procuring Animal Food at this Time for the Supply of His Majesty's Stores, owing chiefly to the Unfitness of the Cattle for Slaughtering in Consequence of the Injury some Time since done to the Pasturage by the Destructive Progress of the Caterpillar through the Country...."

By this time, a new factor had become operative in stimulating the expansion of the settled area: land was becoming scarce in Cumberland and this, together with the rapid increase in the numbers of sheep

Chapter 3.

and cattle, meant that, apart from the poor condition of the pastures, the Cumberland Plain could no longer contain the colony's stock. Requests to move stock out of Cumberland now included references to farms being inadequate for their proprietors' flocks and herds as well as to the deplorable condition of the pastures. To those whose need for additional pasture-land was proven Macquarie gave permission for stock to be moved to Bathurst, but he was unwilling to allow any considerable amount of settlement west of the mountains. His reasons were set out in a letter to Gregory Blaxland who sought his support for a scheme to form a company to pasture large numbers of sheep in the western districts:

"As His Excellency has not on any occasion refused permission to send Flocks to the new Country when applied for, by the Proprietors, when the state of Pasturage on this side of the Mountains seemed to render it necessary, so he will still be ready to grant further permissions in that way as Proprietors may require them --- His Excellency is not however prepared to give a decisive opinion in favour of the principle of an association being formed to constitute a common stock to be sent into the Western Country. Indeed he apprehends that in the present state of the Colony if numerous Herds were sent into that Country they would tend to excite desertion among the Convicts in a very alarming degree who finding abundance of Animal food insecurely

30. The applications for permission to remove stock from Cumberland are to be found in the C.S.I.L.
Chapter 3.

guarded, might be tempted to make their way thither and finally to become formidable to the Establishment contemplated at Bathurst." 31

The condition of the pastures and the increasing numbers of stock in the colony were making it imperative for land outside Cumberland to be made available to the graziers, and the continuation of the drought into the autumn of 1820 aggravated the situation. In June the Sydney Gazette remarked on the poor condition of the cattle and forecast the loss of many if, as expected, the winter continued dry. It did, and so did the spring. In September one grazier complained that although he owned 300 cattle he had not one beast fit to slaughter. 32

In November, Governor Macquarie, who had recently returned from a tour of the south-western country as far as Lake George, decided to make part of this area available to the graziers. His Order stated that the Governor, having visited the country south and west of the Cow Pastures and having found parts of it

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32. Townson - Bigge, 7 September 1820: B.T. Box 24, p. 5056.
well suited for grazing, had

"...taken into Consideration the present exhausted State of the Pasture Lands ... in the County of Cumberland, in part arising from its being overstocked, but principally from the destructive Ravages of the Caterpillar, by which they were some Time visited; and being anxious to extend such temporary Relief to the Graziers as the said New Country may afford, is pleased to notify, that such settlers, as are possessed of Herds or Flocks, may send them for a Time to be hereafter limited to depasture the fertile Tracts of the New Country, they undertaking to do so at their own Risk, and subject to ... Restrictions and Regulations...."

It is important to note that Macquarie was extending "temporary relief" for a time to be limited. He was still avoiding making a permanent settlement in the district, and certainly was not giving the graziers any title whatsoever to the land. Those desirous of taking advantage of this "relief" were required to obtain a permit from the Governor or his Secretary, to be ready to quit the place they were occupying at one month's notice, and to limit themselves to the area between the Bargo Brush and the Cookbundoon Range. Shortly afterwards, however, this last restriction was removed and the whole south-western district, including the

33. G.G.Q. Civil Department, 25 November 1820.
Chapter 3.

Goulburn and Bredalbane Plains, was made available to the graziers.\(^{34}\)

The publication of this Order on the 25th November, 1820 marked the real beginning of the great outward movement of pastoralists and graziers which continued into the thirties and forties. It was, however, different from the squatting movement of those decades, though the distinction is more one of legal status than of grazing techniques. Unlike the squatters, these people moved into unoccupied areas with the Government's permission, if not its whole-hearted approval.

Macquarie had directed the great bulk of the outward movement into the south-western districts, but he also allowed a chosen few to take their stock to Bathurst and permitted John Howe, discoverer of an overland route to the Hunter Valley from Windsor, to depasture cattle on Patrick's Plains. The Illawarra coastal plain also received numbers of stock at this time.

During Governor Brisbane's administration (December 1821 to November 1825), the steady outward

\(^{34}\) G.G.O. 9 December 1820.
movement continued, but was no longer directed principally to the south-west as Brisbane allowed settlers to occupy all districts. The Cumberland Plain continued to be subject to periodic droughts and plagues of caterpillars, and each of these occurrences brought a new spate of applications for permission to remove stock from Cumberland. In the areas beyond the sandstone highlands, settlement spread gradually to the Molonglo and Murrumbidgee Rivers in the south-west and to Wellington Valley, the Cudgegong, and Talbragar in the west and north-west. (The details of the settlement of these districts are discussed in later chapters).

To give the graziers who were temporarily occupying pastures in these outlying areas some kind of title and security of tenure against trespassers, Governor Brisbane instituted the "Ticket-of-Occupation". Having established himself in a suitable place, a grazier could obtain a ticket from the Colonial Secretary's office by informing him of the name of his situation and its location. The ticket then issued gave the grazier exclusive grazing rights to a certain area of land surrounding his stockyard. The most usual area was described as extending "two geographical miles in
Chapter 3.

every direction from your stockyard at...", but many were issued for a stipulated number of acres. The holder of a Ticket-of-Occupation was not allowed to cut any more timber than was required for the building of huts and a stockyard, and had to be prepared to abandon his holding at six months' notice. As land was surveyed, the holders of tickets-of-occupation using it were given notice to quit, and, if they so desired, were issued with new tickets for more remote areas. The first ticket-of-occupation was issued in February 1822 and the last in 1826. Between these dates, more than 200 were issued, the greater number being for situations in the south-western districts or for Illawarra, but a few were given for land in the Hunter Valley and for isolated parts of the County of Cumberland. (See Map 7).

For the colonial government of the time, the issuing of tickets of occupation solved an awkward problem of land administration. It has already been shown that by 1821 it had become imperative for the graziers and pastoralists to be allowed to occupy areas outside

35. Copies of the tickets-of-occupation issued are to be found in C.S.L.M.P. See also G.N. 27 October 1824.
NOTE ON THE COMPILATION OF MAP 7

Lands Granted

The want of complete lists of the land-grants made between 1821 and 1826 makes it impossible to show with complete accuracy the extent of land in the outlying districts which had been alienated by 1825, and the areas shown on the map have been defined from the following sources:-

1 Henry Dangar's "Map of the River Hunter and its Branches..." (Cross, London, 1828) which shows the reserves and grants ordered prior to the end of 1825. The outline of the area has been slightly simplified to permit its clear reproduction. (See also Map 10).

2 A Plan of the Lands Located at Bathurst, 1824, [by] G. C. Stewart, Sydney, N.S.W. The Mitchell Library has a photographic copy of this map made while the original was in the possession of the late Sir William Dixon (M.L. F15/1).

3 "List of Grants..." 1812 to 1821 (H.R.A. I, x, 560-6), which gives the particulars of Macquarie's grants of land in Illawarra prior to 1821. These grants are marked on the N.S.W. Lands Department's map of County Camden.

4 Volume ii of the Berry Estate Papers (M.L. A720) contains several maps showing the boundaries of the three areas in process of granting to Alexander Berry and Edward Wollstonecraft.

For want of precise information no attempt has been made to show the position of a number of grants made in the Bong Bong and Illawarra districts between 1821 and 1825.

Areas Held Under Ticket-of-Occupation

The areas occupied by the holders of Tickets-of-Occupation have been mapped from the descriptions of the runs in the C.S.L.M.P. The runs shown as "Position Doubtful" are those for which the descriptions were not sufficiently precise for the situation of the run to be decided with certainty.

This map has been published in the Australian Geographer (May, 1957) and is reproduced here by permission of the Editor.
Chapter 3.

the County of Cumberland, but only small areas in the outlying districts had been surveyed at this time, and it was not only impossible to fix the boundaries of any grants that might be made, but it was also impossible to know the area of land available for granting in these areas. Two other factors further complicated the situation. As a result of the large number of grants made by Macquarie and the arrears into which the work of the Surveyor-General's Department had fallen, there was a considerable number of grants promised by Macquarie yet to be located, and until these grants had been executed the predial standing of the colony was obscure. Further, the question "Grants or sales?" awaited an answer, which was expected to come with Commissioner Bigge's Reports and the British Government's instructions implementing his recommendations. Meanwhile, the whole question of land administration was more or less in abeyance. Under these circumstances the Ticket-of-Occupation system met the exigencies of the situation by allowing the use of land without requiring its alienation. When it was finally decided to sell and lease land in 1826, the Ticket-of-Occupation system came to an end. After all, no one would buy or rent land while they could use it, rent free, under a
Chapter 3.

Ticket-of-Occupation.

If the issuing of Tickets-of-Occupation helped the government through a difficult phase of land administration, it was even more of a boon to the settlers. It allowed the graziers to obtain large areas of new pasture land very quickly and, at the same time, saved them the expense of establishing permanent stock runs in the interior. (The only expenses involved in using a Ticket-of-Occupation run were the wages of the stockmen and the cost of their provisions). Moreover, it allowed them time to gain experience in raising stock in the unfamiliar conditions of the interior before selecting a site for a permanent run, and the opportunity to change their situation if their first location failed to meet their needs. The system also allowed the "lower orders" of colonial society to enter the grazing and pastoral industries. Ex-convicts and their sons, the "currency lads", could not obtain large grants of land and so were unable to keep more than a few head of sheep or cattle on their small farms which could not accommodate flocks or herds of any size, but provided they possessed stock, they were able to obtain a Ticket-of-Occupation for an area comparable in size to
Chapter 3.

the number of stock they possessed.

Governor Darling's regulations for the granting and sale of land which brought the Ticket-of-Occupation system to an end, also proclaimed limits within which persons desiring to obtain land by grant or purchase had to make their selection. The area available for settlement extended from Cape Hawke and Wellington Valley in the north, to Bateman's Bay in the south, and westwards as far as the Macquarie River. These limits were imposed as a measure of expediency rather than policy. They were not the product of any theory of systematic colonization or closer settlement, but merely an attempt to restrict the area of land available for alienation to an amount that could be surveyed and valued by the Land Commissioners within a reasonable time.

Indeed, expediency, rather than deliberate policy, was the key-note of the whole history of the

37. Darling - Bathurst, 22 July 1826 and enclosures, and 5 September 1826 and enclosures; H.R.A. I, xii, 374ff and 536ff.
Chapter 3.
pastoral expansion. Detached scientific investigation and an adventurous spirit had failed to solve the problem of crossing the Hawkesbury sandstone highlands, but a pressing need for pasture stimulated efforts which resulted in the finding of several routes across them: to Bathurst in the west, to the Wingecarribee in the south-west, and to Illawarra in the south-east. Governor Macquarie's desire for systematic carefully controlled settlement of the newly discovered districts had to be abandoned in face of the necessity to move stock from Cumberland in 1819-20, and although he did direct the greater part of the outward movement to the south-west, it was only a short time before Brisbane removed the restriction on the settlement of the west, and allowed the unrestricted occupation of all the remote districts. Again, both the Ticket-of-Occupation system and the limitations to settlement imposed in 1826 arose from administrative convenience rather than deliberate policy. Fundamentally, the entire situation had been precipitated by a capricious climate and the vagaries of caterpillar plagues, and the colonial response had been immediate and extempore.
Unlike the grazing expansion, the extension of agricultural settlement beyond the Cumberland Plain was anticipated many years before a critical situation arose and, in the actual event, resulted from the almost complete occupation of land in the Cumberland Plain forcing the settlement of remote areas. It began somewhat later than the grazing expansion and like it was directed, in the first instance, to a single district - the Hunter River Valley.

The first to consider the question of establishing agricultural settlements away from the Cumberland Plain was Governor King. More from a spirit of inquiry than with the object of finding a site for a settlement, he had ordered an exploration of the Hunter River in 1801, and had been pleased to find that the area offered not only coal, which had been found there in 1798, but also fine timber and "excellent soil ... not subject to floods, [which] would ... be a very fit situation for forming a settlement for the cultivation
of grain or grazing." Following the Irish insurrection of 1804, King established a small penal settlement at Newcastle at the mouth of the Hunter to which the "worst description of the Insurgents" were sent. But by 1804, King was beginning to fear a shortage of arable land on the Cumberland Plain and began to consider the possibility of establishing a farming settlement in the Hunter Valley or elsewhere.

At this time, the greater part of the favoured situations near Parramatta had been occupied (and, indeed, encircled by farms on inferior land) and almost the whole of the alluvial lands were settled. Explaining the position to Lord Hobart, King wrote:

"... most of the places where the soil is fit for cultivation is granted away. The remainder is fit for little else at present than yielding the best pasturage. The tracts reserved for Government... and the commons assigned to the settlers,... together with the allotments of land already granted, occupy nearly the whole of the disposable and profitable land in


39. See Chapter 5.
Chapter 3.

... It will therefore be obvious that when the small remaining disposable grounds are located that other situations must be found for a great number of settlers.\textsuperscript{40}

King was reserving the Cowpastures for the wild cattle, having in mind two possible areas for a new settlement: the Hunter Valley, or the flats at the mouth of the Shoalhaven.\textsuperscript{41} He did not for a moment consider the possibility of settling the forest-lands: these were "fit for little else ... than yielding the best pasture" and were certainly not regarded as "profitable".

With the object of assessing the worth of the Shoalhaven area, King sent an expedition there in 1805, and reported to Earl Camden that:

"The Officer and Surveyor who I sent to examine the country about Shoals Haven, report much good Land on the Banks of two small Bar Rivers, which will hereafter prove of great Benefit to the Extension of these Settlements."\textsuperscript{42}

\textsuperscript{40} King - Hobart, 14 August 1804: \textit{H.R.A.} I, v, 6-7.

\textsuperscript{41} The country at the mouth of the Shoalhaven River was considered by its discoverer, Bass, to be the only attractive area on the coast between Sydney and Western Port. See Chapter 8.

\textsuperscript{42} King - Camden, 30 April 1805: \textit{King's Letter Books}, vol ii, p. 211 (M.L.).
Chapter 3.

Before King had made any move to establish a settlement outside Cumberland, however, he was recalled and the settlement of the forest-lands removed, for a time, the need to make such a settlement. The problem did not arise again until the latter part of Macquarie's administration, at which time the situation was considerably different from that existing in 1804 when King had faced it.

In 1817, when Macquarie informed Lord Bathurst that "Disposable Lands are now getting Very Scarce in this part of the Colony," the greater part of the forest-lands had been occupied or had been promised to settlers, but the colony's horizons were wider than they had been in 1804 and were extending rapidly. The Bathurst Plains to the west of the Blue Mountains had, for the last two years, been receiving stock and ten farmers to be placed on small allotments were about to test the agricultural potential of the area; to the south-west, Throsby had recently penetrated the Bargo Brush and examined the open woodland of the "New Country" on the Wingecarribee; and the Illawarra coastal

43. Macquarie - Bathurst, 12 December 1817: H.R.A. I, ix, 713.
Chapter 3.
Plain, despite the difficulties of access down the steep pass from Appin, was depasturing stock. None of these areas offered exactly what Macquarie required. The Bathurst Plains were not only remote, but were to be methodically settled according to a plan which Macquarie hoped would be sent from England. The "New Country" was also a long way off, and its extent and value had yet to be assessed; while the Illawarra district was too difficult of access to make the marketing of produce easy. The one area which offered both large areas of fertile soils and easy transportation of produce to Sydney by sea was the Hunter Valley, but until the penal settlement could be moved from Newcastle its occupation by settlers would not be advisable.

The area which Macquarie suggested for a new settlement was the Jervis Bay - Lower Shoalhaven District. Jervis Bay was considered the "finest and Safest Harbour" on the whole of the south-eastern coast, and Macquarie had received reports of good land flanking the lower course of the Shoalhaven River from the cedar getters who had visited this area between 1812 and 1814. He therefore proposed to have the country lying between the recently settled parts of the Illawarra plain and
Chapter 3.

Jervis Bay examined and, if the reports of large areas of fertile soil were confirmed, to establish a settlement at Jervis Bay and to develop the alluvial flats of the Shoalhaven as a farming district. Such a plan would result in there being a continuous ribbon of settlement along the coast from Illawarra to Jervis Bay, in which the settlers would have the advantage of water carriage for their produce being sent to the Sydney market.

Meanwhile, the need for a new area of settlement was increasing as more and more convicts, having served their sentences, became free and had to be settled on farms, and as growing numbers of free settlers arrived in the Colony. The rapid filling of the forest-lands and the continuing reservation of the Cow Pastures were making it increasingly difficult to provide the capitalist immigrants with farms of the best quality. This was a matter of particular concern for Macquarie who hoped that their exertions and example would revive the colony's flagging agriculture. Further complications lay in the larger numbers of convicts who

44. Macquarie - Bathurst, 12 December 1817 and 16 May 1818: H.R.A. I, ix, 713 and 795.
Chapter 3.

were arriving each year and in the fact that it was becoming increasingly difficult to find useful employment for them, partly because of their large numbers, and partly because many settlers, suffering the effects of droughts or floods, could not maintain assigned servants and were not only unable to employ more of them, but had been obliged to return those formerly in their service to the government. Moreover, many farms were by this time as completely cleared, stumped and fenced as their owners could afford, and this together with the plough's replacement of the hoe as the major agricultural implement meant that the settlers' needs for convict labour had lessened. Many settlers also preferred to employ freed men, who had experience of farm work in the colony, than to accept as assigned servants convicts who, coming from industrial cities, had neither knowledge or skill which could be usefully applied in farm work and who, in many cases, were not fit enough to work in the

45. See Macquarie - Bathurst, 16 May 1818, 24 March 1819, 20 July 1819, 28 February 1820, and 1 September 1821: H.R.A. I, ix, 794; and x, 88, 191-2, 279, and 366.

46. It was possible for two men to plough an area formerly requiring the labour of five cultivating with hoes. (See Wm Cox's Evidence before Bigge: B.T. 5, pp. 1937ff).
Chapter 3.

fields. Macquarie believed that the establishment of a new settlement would not only provide the newly arrived settlers with better allotments than were available in Cumberland, but would also absorb the surplus of convict labour in the unskilled work of clearing farms.

Earl Bathurst approved of the plan to settle Jervis Bay (provided Macquarie could garrison his settlement without an increase in his military establishment), but the plan was never brought to fruition. There were two reasons for this: first, the fact that Oxley gave a most unfavourable report on Jervis Bay as the site for a settlement, and second, Oxley's discovery of Port Macquarie - a far more suitable place for colonization.

47. See, for example, Wm Cox's evidence before Commissioner Bigge (B.T. 5, pp. 1935-2025) and Alexander Riley's evidence before the House of Commons Select Committee on Gaols, 1819 (Minutes of Evidence, pp. 9-97).

48. See Macquarie - Bathurst, 16 May 1818, and 20 July 1819: H.R.A. I, ix, 794; and x, 192.


50. Oxley - Macquarie, 10 January 1820: H.R.A. I, x, 254. This report is discussed in connection with the settlement of the Lower Shoalhaven District in Chapter 8.
Chapter 3.

Early in 1819, Macquarie reported to Earl Bathurst that the extensive area of rich lands adjoining the Hunter River, much of which had been cleared of timber by cedar getters and which enjoyed easy and quick communication with Sydney by sea, had "become an Object of Valuable Consideration in the Necessary Increase of the Population, and hold out important Advantages for the Establishment of Free Settlers upon them." Also, that as a route from Newcastle to the Hawkesbury had become well known among convicts, Newcastle was no longer effective as a place to which those who committed crimes in the colony could be sent for punishment. He went on to remark that if a suitable site further north were found he considered that it would be advisable to move the penal settlement and allow settlers to occupy land in the Hunter River valley. Oxley had already discovered Port Macquarie and following a re-examination of it in 1819, reported that it had a safe harbour giving access to the rich lands of the Hastings valley. In July 1819, Macquarie recommended that a penal settlement be placed there to supersede Newcastle and some time later received Earl Bathurst's authority to

53. Macquarie - Bathurst, 8 March 1819: H.R.A. I, x, 43–44. The relevant section is quoted in Chapter 5.
Chapter 3. establish a settlement at Port Macquarie. 54

Commissioner Bigge, who was in the colony when Macquarie was planning the transfer of the penal settlement to Port Macquarie, did not wholly approve of the move. He considered that the increasing numbers of convicts and the smallness of Macquarie's military force made the expediency of establishing a new settlement questionable, and believed that Port Macquarie was too close to Sydney and possessed too many natural advantages to be the site of a penal settlement. He would have preferred to see Port Macquarie occupied by free settlers, and the penal settlement removed to some place possessing "the fewest recommendations of soil" and the greatest inaccessibility to ships (Moreton Bay, Port Curtis and Port Bowen he named as possible sites). He did, however, wholeheartedly approve of the occupation of the Hunter Valley by free settlers. 55

Bigge's opposition did not prevent Macquarie


Chapter 3.

proceeding with his plan, and Bigge, no doubt aware of the pressing need to open the Hunter Valley to settlers, even urged Port Macquarie's early occupation. In the last year of his governorship, 1821, Macquarie proceeded to prepare Port Macquarie to receive the greater number of the convicts at Newcastle and gave the first promises of land in the Hunter Valley. In 1822, the settlement of the Hunter Valley began with the survey and allocation of blocks to a number of settlers and during 1823 a steady stream of them began to arrive in the district and select sites for their farms.

Although Governor Brisbane removed all restrictions on the settlement of the Bathurst district, the greater proportion of newly arrived settlers elected to occupy land in the Hunter Valley rather than at Bathurst. Their choice was probably influenced by the


57. Port Macquarie was occupied in April 1821, and in December, the commandant at Newcastle was informed that the number of convicts there would be reduced as soon as Port Macquarie was in a fit state to receive them. Large numbers of convicts were not moved from Newcastle to Port Macquarie until the latter part of 1822 and 1823.
facts that the Hunter Valley possessed larger areas of rich alluvial soil than were available near Bathurst, that water transport by river and sea to Sydney was available whereas cart transport to and from Bathurst was slow and costly; that while Bathurst was eminently suitable for the raising of sheep, it had little to offer the agriculturalist in comparison with the Hunter Valley; and that, because of the more rapid survey of the Hunter Valley, settlers would be able to obtain their certificate of grant more quickly, and so become eligible for the six-months' rations and the assistance of assigned servants allowed them sooner than might have been possible at Bathurst.

Thus, the Hunter Valley became the major area of agricultural settlement outside Cumberland. In the four years 1822-1826, more than 372,000 acres extending along the Hunter River upwards of 150 miles were appropriated for settlers. While the area which had been formally granted was, in 1825, slightly smaller than that granted in the Bathurst district, it was

Chapter 3.
composed of a much greater number of holdings, supported
a larger population, and included a higher proportion of
cultivated land than at Bathurst.⁵⁹

III. CONCLUSION

In terms of the actual expansion of population,
the achievement of the grazing and agricultural expansion
is not particularly spectacular. At the 1825 muster,
only about 10% of the colony's population was established

⁵⁹ According to the 1825 returns, the area held in the
Bathurst district was 91,636 acres while that in the
Newcastle district was 67,798 acres. (These fig­
ures would include only land which had been granted,
as distinct from that occupied in the process of
granting). The population of the two districts was
1,109 at Bathurst and 1,637 at Newcastle. At
Bathurst only 1.9 of each 100 acres held was cul­
tivated, whereas the proportion in the Hunter Valley
was 3.7. See New South Wales Returns 1825, pp. 163
and 166 (M.L.). In Map 7 the area granted at
Bathurst appears to be smaller than the area of
granted land in the Hunter Valley. There are two
reasons for this: (i) that the map shows the area
granted in the Bathurst district for 1824 and that
for the Hunter Valley for 1825; and (ii) that the
survey of land in the Bathurst district did not
proceed as rapidly as did that of the Hunter Valley,
and the map only shows the grants which had been
measured and had their boundaries fixed – there
were a number of properties which had been granted,
and occupied but which had not been surveyed and so
are not shown on the map.
Chapter 3.

in the settled areas outside the Cumberland Plain, and of this, about half was in the Hunter Valley. But in terms of increase in the period 1821-1825, and in terms of distance and stock numbers, the results are more significant. The four years 1821-1825 saw the population of the outlying districts increase from 1.2% to 9.4% of the colonial total. In the same period, the percentage of the colony's sheep and cattle in these districts increased from 28.6% to 56% and from 15.6% to 36.1% respectively: a doubling of the percentage in each case. At the end of 1825, the most remote stations were more than 200 miles from Sydney, on the Yass Plains in the south-west, and at Talbragar in the north-west. When it is remembered that the settled area had been extended in a series of isolated islands rather than in a continuous belt, these distances and the remoteness of some of the more distant stations is the more impressive. (See Map 7).

In succeeding chapters, the details of the settlement of each of these outlying districts will be discussed.

60. See Appendices 9 and 10 which give the distribution of population and of cultivated land and livestock in New South Wales in 1821, 1825 and 1828.
Chapter 4.

POLICY AND EXPEDIENCY: LAND

SETTLEMENT, 1826-9.

The end of the first big outward movement of settlement ought to have come in 1826. The government had intended that it should and had issued an Order stating that "...Boundaries have been fixed within which Persons, who may be allowed to purchase or to receive Grants on paying an annual Quit Rent, will be permitted to make their Selection."¹ But though the boundaries seemed clear enough to the government, they were not clear on the ground. A grazier travelling south-westwards was unlikely to know when he had passed beyond a line running southward from Campbell's River or south of the latitude of Bateman's Bay.² But in 1826 there was not sufficient knowledge of the topography of the colony to permit a concise and clear definition of the boundaries. This was a direct result of the understaffing

¹. G.O. 5 September 1826.
². See Appendix 11 which describes the limits imposed in both 1826 and 1829.
Chapter 4.

of the Surveyor-General's Department and the arrears into which its work had fallen.

Until 1822, the staff of the Surveyor-General's Department had consisted of three people: John Oxley, the Surveyor-General, and his two assistants, James Meehan in New South Wales and George W. Evans in Van Diemen's Land. (Though Evans held the V.D.L. appointment, in actual fact he spent a good deal of his time in N.S.W.). Meehan was not only an assistant surveyor, but also held the posts of Collector of Quit Rents, and Superintendent of Roads, Bridges and Streets in New South Wales. He was engaged for the greater part of his time in surveying parts of the County of Cumberland and marking the boundary lines of land grants: Bigge was told that he had measured every farm granted in the colony since 1803. Oxley, meanwhile, had been principally concerned with exploration and reconnaissance survey work: he had explored the courses of the Lachlan and Macquarie Rivers, discovered Port Macquarie and revisited it several times in connection with the establishment of the penal settlement there, examined the Illawarra-Shoalhaven-Jervis Bay area to assess its suitability for settlement, and had
Chapter 4.

undertaken a journey southwards from Bathurst to Lake George and back to Sydney with Commissioner Bigge. A further factor contributing to the arrears in the department's work, was the liberality with which Macquarie had given promises of grants during the last years of his governorship. In order to give the maximum encouragement to settlers, he had given them land as freely as his instructions would allow - and to some of the free settlers rather more freely. He granted land to those whose farms were becoming insufficient to support their increasing flocks and herds, rewarded successful agriculturalists with additional grants, and even promised land to those who were about to buy stock or who intended buying more than they already possessed. This policy had two consequences: first, that Meehan was unable to execute the grants as quickly as Macquarie was promising them and so Governor Brisbane found when he assumed office that there were grants amounting to 340,000 acres yet to be located; and second, that settlers became accustomed to obtaining land without difficulty. Brisbane appointed additional assistant surveyors to help reduce the arrears and to cope with the increasing numbers of immigrant settlers arriving in the colony, and promised land only to those
who had the intention and ability to use it productively. "Not a cow calves in the colony but her owner applies for an additional grant in consequence of the encrease of his stock" he complained, and gave tickets-of-occupation, not grants, to meet the increase. Those about to acquire stock were told that they would be given a ticket-of-occupation when they possessed the stock, not before. Government employees requesting grants were informed that they would receive land upon quitting the government service, and their sons were refused grants. Immigrant settlers were asked to state how much capital they intended to spend in bringing their land into production, and were given grants in proportion to their intended outlay. Sons of established settlers received grants only if their fathers' properties had been considerably improved. Ex-convicts applying for land had to be recommended by clergymen or magistrates, and were not given it unless they intended to reside upon it themselves. These measures,


4. This account of both Macquarie's and Brisbane's practice in granting land is based on the replies given to applicants for grants. The applications are to be found in the C.S.I.L. and copies of the replies in C.S.L.M.P. Both are far too numerous to be cited individually.
Chapter 4.

and particularly the tickets-of-occupation and the appointment of additional surveyors, enabled the greater part of the arrears to be overtaken, but although surveyors were at work at Bathurst, in Argyle and in the Hunter Valley, there was still no map of the colony showing anything more than the approximate position of its most outstanding topographic features. The surveyors were engaged in fixing the boundaries of land grants, not in producing a general map of the colony.

Thus, in 1825 when orders were received from England for a division of the colony into counties, hundreds and parishes, and for the land to be valued preparatory to its sale, there were no maps which could be used in making the subdivision - not even a comprehensive map of the County of Cumberland. Therefore it was decided to limit the area which would be available for settlement to a tract which could be mapped, subdivided and valued quickly, but the want of precise information made it impossible to define the boundaries of such an area in terms of landmarks. Its bounds, apart from the Macquarie River, were therefore fixed in terms generally precise in phrasing but vague in effect, such as "from Cape Hawke, a line due west...", and
Chapter 4.

reaching a maximum of vagueness in "Campbell's River, pursuing the line of that River to the Southward." Such lines may have been clear enough on a map in the Colonial Secretary's Office, but they were, apart from the rivers, quite invisible on the ground.

By the end of 1827, the Surveyor-General's Department had a staff of fifteen surveyors (Oxley, the Surveyor-General; Major Thomas Mitchell, who was Deputy Surveyor-General and had recently arrived from London; and thirteen assistants), four draftsmen and two clerks. Additions to the staff had permitted the department to reduce the arrears of its work still further, but little progress had been made in mapping the country other than in the settled areas where grants were being located. Soon after his arrival in 1827, however, Mitchell began a triangulated survey of the area within the limits of settlement, and by 1829, had proceeded sufficiently with the mapping of the country to allow the boundaries to be redescribed in terms of recognisable

topographic features, except in the west where they included the western boundary of the county of Bathurst (part of which was a "line of marked Trees") and "a Line in Continuation thereof bearing due south to the Pic of Pabral" (ie Mt Coree about 15 miles west of Canberra), and for the area within them to be divided into nineteen provisional counties. It was not until 1834 that the boundaries of the counties (and the settled area) were fixed permanently. In the same year, Mitchell published his Map of the Colony of New South Wales, the first map of the colony based on a trigonometrical survey, and the first to attempt to show its topography in any detail.6

6. The division of New South Wales into counties is discussed in Appendix I. Mitchell's Map of the Colony of New South Wales compiled from actual measurements with the chain and circumferemeter, and according to a trigonometrical survey was drawn, engraved and printed in Sydney, and published in both Sydney and London. J.H.L. Cumpston gives an account of some of the events connected with the survey and map in Thomas Mitchell, Surveyor General & Explorer (O.U.P., Melbourne, 1954). The details of the triangulation were described by Mitchell in his report Progress in Roads and Public Works. The map, drawn on a scale of about eight miles to the inch, showed by hachuring the physical features of the areas of the nineteen counties (except County Gloucester) and in the immediate vicinity of Port Macquarie.
New South Wales

THE NINETEEN COUNTIES

as shown on a map published in
The Geographical Journal, 1832

Map 8.
Meanwhile the outward movement of settlement was continuing, though at a slower pace than before. It was still being motivated by the circumstances which had initiated it: the insufficiency of the Cumberland farms for the large numbers of stock being bred upon them, the occasional depredations of caterpillar plagues, and the recurrence of drought. The years 1826 to 1829 were, in fact, ones of almost continual drought. By January 1827, the removal of the government stock from Rooty Hill was recommended and by October losses of stock were being reported. The Australian stated... such a season of drought as the present, it is said, was never known in this colony. The beds of rivers which have always had a rapid and deep stream in the driest weather are now quite dry and traversable for miles. The Wollondilly is reduced in some parts to almost a rivulet." In January 1828, the Brisbane Distillery in Sydney had to close down because Black Wattle Swamp

8. S.G. 26 October 1827.
(its source of water) had dried up. Later in the year residents of Sydney had difficulty in obtaining water and in 1829, it was being sold in Sydney at fourpence per gallon. Charles Sturt summed up the situation in these words:

"The year 1826 was remarkable for the commencement of one of those fearful droughts to which we have reason to believe the climate of New South Wales is periodically subject. It continued during the two following years with unabated severity. The surface of the earth became so parched up that minor vegetation ceased upon it. Culinary herbs were raised with difficulty, and crops failed even in the most favourable situations. Settlers drove their flocks and herds to distant tracts for pasture and water, neither remaining for them in the located districts. The interior suffered equally with the coast, and men at length, began to despond under so alarming a visitation. It almost appeared as if the sky were never again to be traversed by a cloud."

The drought broke in late October and the relief was so great that the Governor ordered that Thursday the 12th November be observed as a day of thanksgiving "... in consideration of the very serious Calamity with which the Colony was threatened in Consequence of the unusual and long continued Drought, as well as the providential

Chapter 4.

Change which has taken place since the Occurrence of the late favourable Rains...."12 It is interesting to note that while congregations throughout the colony gave thanks for their deliverance from "those evils which we most justly have deserved" heavy rain fell in many parts of the colony.13 (Some of the evils which threatened many of the settlers were detailed in the provisions for a new insolvency bill which were published on the 11th November).

Prior to 1826 the spread of settlement had been fostered by the ticket-of-occupation system: graziers had been able to establish themselves wherever they chose and had dispersed widely occupying the localities which offered the best pasturage. But after 1826 this was no longer possible. The ticket-of-occupation was abolished and those who wished to occupy new runs

12. Proclamation, 3 November 1829.
13. See A Form of Prayer with Thanksgiving to be used on Thursday, November 12, 1829.... and the Sydney Gazette, 14 November 1829, which remarked, "It was not a little remarkable, that throughout the whole of the day the 12th there was a heavy fall of rain, of the kind that penetrates the earth, and does substantial good to vegetation."
Chapter 4.

were expected to obtain the land by lease, grant or purchase and to remain within the limits of settlement. But most of the more attractive areas within the limits had already been occupied and in April 1828, Mitchell drew the governor's attention to the fact that:

"Good land is now Selected wherever it can be found, and it is so scarce that, even with the present small Population, various Selections have already been made beyond the prescribed Limits." 15

But the imposition of the limits and the abolition of the ticket-of-occupation slowed the pace of the outward movement, and the outstanding feature of land settlement between 1826 and 1829, was not so much the occupation of new areas (though this did occur), but the permanent settlement of areas formerly temporarily occupied under ticket-of-occupation, and the enlargement of the established clusters of farms in those areas. The

14. The ticket-of-occupation was abolished to make way for a system of sales and grants, but grazing land was available at a rent of one pound per 100 acres subject to six months' notice to quit. For the reasons for the abolition of tickets-of-occupation, see the despatches, reports and minutes in H.R.A. I, xii, 377, 378, 387-8, 405-6, 419; and xiii, 128 and 224.

enlargement of the existing nuclei was further assisted by the system of leasing Crown Lands which was instituted in 1828. This allowed settlers already in possession of land to rent unoccupied lands adjoining their properties at a cost of two shillings and six pence per hundred acres per annum, the land being subject to resumption at one month's notice. Up to the end of 1829, almost 374,000 acres were leased under these terms.

As settlers could only lease land contiguous to their existing holdings, it followed that the greater part of the rented land was found in those districts in which large numbers of settlers were established and in which


17. Lists of leases given were published in the Government Notices of 22 and 30 April, 16 July, 9 August, 27 October, and 28 December 1829. A full list of all the applications for leases giving a fuller description of the land applied for, the Surveyor-General's report on the application, the Governor's decision whether to allow it or not, the date of the Government Notice in which permission to occupy the land was published, and a note of any subsequent resumption of the whole or part of the land leased, is given in the Colonial Secretary's Abstract of Monthly Leases, 1st February 1829 to 31st July 1831 in the Mitchell Library.
there were extensive areas of ungranted land adjoining the granted areas: that is to say in Counties Argyle and Camden, near Bathurst and in the Hunter Valley.\textsuperscript{18} Although the \textbf{Notice} announcing the availability of land for renting made no mention of the use to which it was to be put, the \textbf{Notices} publishing permission for the lessees to occupy land began: "The following persons are permitted to Depasture their \textbf{livestock} in the lands adjoining their respective properties, as undermentioned, on the conditions specified in the Regulations of 16th October 1828."\textsuperscript{19} While the leases were of undoubted benefit to the settlers in allowing them additional grazing land, this does not appear to have been the whole intention of the government in making lands available for renting. The \textbf{Notice} of the 16th October 1828, indeed, seems to show that the principal object of the leases was to stop unauthorised grazing on Crown Lands and, incidentally, the damage done to unfenced holdings by stock grazing on the fringes of the permanently settled areas:

\textsuperscript{18} See Appendix 12, Table A, Leases of Crown Land, 1829.

\textsuperscript{19} G.N. 22 April 1829. ["Livestock" in \textit{italics} in G.N.].
"Whereas, by an Act of the Governor and Council, of the Present Year, No. 11, intitled 'An Act to authorise the Erection of Pounds, and for regulating the Impounding of Cattle', it is enacted, that all cattle found trespassing on the Unlocated Lands of the Colony are liable to be impounded: and Whereas, with the View of further restricting unauthorised Individuals from driving and depasturing their Cattle on all parts of the Colony, to the great Injury of the settled Inhabitants, His Excellency the Governor has judged it expedient to permit settlers to occupy, during Pleasure, the unlocated lands immediately adjoining their respective Grants...."

Meanwhile settlers had occupied lands granted to them in several new localities within the limits and in several places beyond them. On the coast south of Sydney new farms were established in the vicinity of Ulladulla, on the Nelligen and Buckenbowra Rivers near Bateman's Bay, and on the lower course of the Moruya River which lay outside the limits. Further west, between the coast and the Shoalhaven River, a number of grants were taken up in the granitic country formerly held under ticket-of-occupation in the Jembaicumbene-Braidwood district, and on the basaltic country at Nerriga. On the Southern Tableland, the granted area spread from the Goulburn (now Gundary) and Breadalbane Plains to the Molonglo and Limestone Plains on the Molonglo River, and southward to Michelago on the
Chapter 4.

Murrumbidgee; westward from Gunning and Gundaroo to Mourumbateman and the Yass Plains; and northwesterly to the Abercrombie River. (The Molonglo and Limestone Plains, possibly the Yass Plains, and the Gundaroo, Gunning and Abercrombie areas had previously been occupied under ticket-of-occupation). The greatest expansion took place in the Western Uplands, where, following the removal of the Government's reservation on the land to the west of the Macquarie River, settlement spread southwestwards along the valley of the Belubula River to the Lachlan. To the north and west of Bathurst, several stations were established along the road to Wellington Valley, and from Dabee, the valley of Bylong Creek (a tributary of the Goulburn) was occupied. Late in 1829, as result of the drought in the Hunter Valley "several large stockholders" drove their herds across the Liverpool Range to graze on the Liverpool Plains, and on the north coast, two settlers were granted land at the mouth of the Manning River. All in all, it appears that the outward movement had almost ceased: the most remote stations were further out than they had been in 1826, but not so very much beyond those established at that time.
Chapter 4.

But if the extent of the occupied area in 1829 was but little different from that in 1826, its importance to the colony had grown considerably. The percentage of the colony's population in the areas outside Cumberland doubled between the censuses of 1825 and 1828, rising from 10.9% to 21.0%. The increase in the proportion of alienated land in the outlying areas was more remarkable, but resulted as much from the employment of additional surveyors and the reduction of the arrears in the issuing of grants as from the settlement of these areas: it increased from 25.5% of the granted land in the colony to 84.2%. Similar increases took place in the distribution of cleared and cultivated land. But though the greater part of alienated land lay outside Cumberland, the Cumberland Plain was in 1828 still the most important agricultural area: it contained 69% of the cultivated land in the colony, but its preeminence was being challenged by the rapid development of farming in the Hunter Valley where the years 1825 to 1828 saw a three-fold increase in its

20. See Appendix 9, Distribution of Population, 1821, 1825 and 1828.

21. See Appendix 10 for the sources of these and the other statistics quoted in this paragraph.
Chapter 4.

share of the colony's cultivated land. In the distribution of livestock, however, the balance had been upset. In 1825 Cumberland had grazed about two-thirds of the colonial cattle and slightly less than half its sheep: by 1828 it contained only about a quarter of the cattle and slightly more than a tenth of the sheep. Of the outlying areas, the Bathurst district was as yet more important for its sheep than its cattle, while the south-western districts remained the major cattle raising ones. Except for land tenure there are, unfortunately, no statistics for 1829 so that the exact position when the settled counties came into being cannot be determined. In all probability it was little different to that existing at the 1828 census. Certainly the land position had hardly changed: of the granted land, 85.3% lay outside Cumberland and 14.7% inside. Including the leased land, the total area occupied by settlers amounted to 3,353,684 acres of which only 13.4% was within the County of Cumberland.22

The settlers granted land on the Manning, those at Talbragar, and, if we take the western boundary

22. See Appendix 12, Table B, Lands Granted 1829.
Chapter 4.

of the 1826 "settled area" to be a line due south from the most westerly part of Campbell's River (an assumption with little justification), those on the western part of the Breadalbane Plains, and on the Molonglo, Limestone and Yass Plains as well as those at Gundaroo and Gunning were all outside the limits of settlement. Some had been beyond them when they were proclaimed, but the settlers given land on the Manning were certainly established outside the limits with the government's knowledge and sanction. It may well be that these grants were made after it had been decided to change the northern boundary of the "settled area" to include the land south of the Manning, but the fact of their establishment there and the leasing of land at Talbragar (which was also brought within the 1829 limits) strengthens the belief that it was indeed expediency rather than policy which led to the imposition of the limits and that the boundary lines themselves were not regarded as immutable frontiers. The opening sentences of both the 1826 and 1829 Government Notices emphasise the provisional and temporary nature of the regulations which they preaced:

1826: "His Excellency the Governor is pleased
Chapter 4.

to notify that the following Regulations... have been established until His Majesty's Pleasure shall be known."

1829: "His Excellency the Governor directs it to be notified ... that the Boundaries of the Colony within which settlers will be permitted to select Land have been fixed, for the present, as follows ...." 23

Policies of systematic colonization and closer settlement belong, in fact, to decades later than the 1820's: the Notice of October 1829 appeared less than two months after the first of Edward Gibbon Wakefield's "Letters from Sydney" appeared in the London Morning Chronicle, and long before it, or any of the theories which the "Letters" begat reached New South Wales. 24

During the 'thirties, however, acceptance of Wakefield's

23. G.N. 5 September 1826 and 14 October 1829 [The underlining in both quotations is mine. TMP].

24. The first "Letter from Sydney" by an anonymous correspondent was published on Friday, 21 August 1829. During the following six weeks ten other letters appeared. Before the end of the year the letters, with an appendix, had been published in book form with the title A Letter from Sydney, the Principal Town in Australia. No author was named, but the volume claimed to have been "edited by Robert Gouger." These letters drew first attention to the need for an over-all policy of colonial development and led to attempts at "systematic colonization." Their ideas found some application in the Rippon Regulations of 1831.
Chapter 4.

theories and the belief that widespread settlement involved a wilful dissipation of resources, let to attempts to confine settlement to the Nineteen Counties. These were, however, largely vitiated by the graziers' need to move further afield as both over-stocking and drought produced a further deterioration of the pastures and an accompanying reduction of carrying capacity. But as late as the 1870's a distinction was still made between the "settled districts" and the remainder of the state; the "settled districts", within the "limits of location", still consisting of the original nineteen counties together with the twentieth, Macquarie (between the Manning and Hastings Rivers), notwithstanding the fact that as early as 1836 the Squatting Act (7 William IV, No 41) had allowed the grazing of Crown Lands outside the limits upon payment of a licence fee of £10 per year, and that by 1870 almost the whole of New South Wales as we now know it had long been occupied.25

With the imposition of the limits of 1839 and

25. The Statistical Register of New South Wales for 1874 (Govt Printer, Sydney, 1875) was the last to distinguish between the "settled districts" (the twenty counties) and the "pastoral districts".
Chapter 4.

the provisional division of the colony into nineteen counties, this general survey of the outward movement of settlement from the Cumberland Plain ends. But before considering in detail the settlement of each of the areas occupied during the 1820's it will be well to note some of the features of land settlement policy and practice in New South Wales especially in so far as they effected individual settlers of various kinds and the placing of their farms.

The original "Instructions" given Governor Phillip made little reference to land settlement. He was empowered to grant land to emancipated convicts, giving each man 30 acres, with an additional 20 should he be married and a further 10 for each of his children at the time of making the grant. These grants were to be free of all fees, taxes and rental for 10 years after which time they would be subject to an annual quit rent. The ex-convict farmers were to receive assistance in establishing themselves in the form of provisions for themselves and their families for twelve months, an

assortment of tools and utensils, and an allowance of "seed-grain, cattle, sheep, hogs, &c., as may be proper, and can be spared from the general stock of the settlement." Any timber suitable for naval purposes growing on the land granted was to be reserved for the use of the Crown. Phillip was also required to report on the agricultural potential of the area near the settlement and to make recommendations on the most suitable ways in which it might be settled by "our subjects employed on military service at the said settlement, and others."

In 1789 he was sent a set of "Additional Instructions" dealing exclusively with land settlement. These included general instructions on the siting of farms and authority to grant land to non-commissioned officers and private marines who intended to remain in the colony after their retirement or the relief of their unit. Non-commissioned officers were to receive 100 acres over and above the emancipists' allowance of land, and privates 50 acres more, the grants being free of fees and rental for ten years but then becoming subject to an annual quit rent of one shilling for each ten acres.

Chapter 4.

These settlers, like the emancipists, were to be allowed a year's provisions and a supply of clothes, seed-grain, and implements, and, unlike the ex-convicts, would also be allowed the services of convict servants if they would maintain, clothe and feed them. Phillip was also empowered to grant land to any free settlers who might come to the colony, the size of their grants being left to his discretion so long as they were not greater than those given to non-commissioned officers. The grants to free settlers were to become subject to an annual quit rent of a shilling per 10 acres after five years. Though the free settlers were not to be given the provisions and tools issued to the other settlers, they were to be allowed convict servants on the same conditions as the marines. To ensure that each grantee should receive a just proportion of good and inferior land, each grant was to be one-third as wide as it was long, and where grants fronted a stream or bay the narrower side was to be the water-frontage so that as many farms as possible should enjoy access to the water. Between every two grants of 100 or 50 acres, and adjoining one of them, "a space of ten acres in breadth and of thirty acres in length" was to be reserved for the Crown and not granted away without special leave though it
could be leased for a period not exceeding 14 years. In suitable places Phillip was instructed to lay out "townships" having "natural boundaries extending up into the country and comprehending a necessary part of the seacoast, where it can be conveniently had." These were to be not so much "townships" in the sense of "villages", but rather complete units including not only the town but also its arable, pasture and wood land, and having, as the "Instructions" put it, "town and pasture lots convenient to each tenement."28 Within the town itself land was to be reserved for fortifications, barracks or other military or naval services, and for a town hall and other public buildings, while close by 400 acres were to be set aside for the maintenance of a minister and a further 200 for a schoolmaster. Woodlands which might furnish naval timber were also to be reserved. Such was the pattern for the development of the Australian cultural landscape envisaged by the Colonial Office.

It should be noted that neither the original

28. See 'A Note on "Township": Aust. Geogr. vi, No. 3 (May 1954), 24-5.
Chapter 4.

"Instructions" nor the "Additional Instructions" allowed the governor to grant land to the commissioned officers. Having been asked to make a recommendation on this point Phillip had sought permission to give the officers (both civil and military) grants, but the authority for him to do so did not reach the colony before he left it and he had therefore refused to grant the officers land though he permitted them to cultivate it. Sanction to grant land to the civil and military officers was received in Sydney early in 1793. The size of the grants which the officers might receive was not stipulated, but as it was considered that they would be only temporary settlers who would give up their farms upon leaving New South Wales, it was suggested that they be granted "such portions of land, and in such situations as would be suitable for a bona fide settler should it ever come into the hands of such a person."

29. See Phillip - Sydney, 10 July 1788, and Dundas - Phillip, 14 July 1792: H.R.A. I, i, 65-6 & 365.
Governor Hunter's "Instructions", though substantially the same as Phillip's, varied from them in matters of detail. The annual quit rent for emancipists' farms was to be sixpence for each thirty acres after ten years. Provisions were to be supplied to ex-convict settlers "until such time as their ... labour may reasonably be expected to enable them to provide for themselves" - not for only twelve months. Whereas Phillip's "Instructions" and "Additional Instructions" had recognised three classes of settlers - emancipists, marines (non-commissioned and private), and free settlers - and had made separate provisions for each, Hunter's "Instructions" recognised only two - emancipists and "our subjects" who might desire to become settlers and who might be, presumably, commissioned officers (of whom no specific mention is made), non-commissioned officers, privates or free settlers. Grants to emancipists were to be made on the same scale as before, but grants to other persons were to be of "such amount as you shall judge proper" but not exceeding 100 acres over and above that allowed to ex-convicts. These

grants were to be free of tax, fee or rental for ten years and then become liable to a quit rent of one shilling for every 50 acres. Hunter was empowered to make an additional grant (subject to the approval of one of the Principal Secretaries of State) to "any peculiarly meritorious settler or well-deserving Emancipated convict" worthy of such a reward. The services of assigned convict servants were to be available to "such persons as are or shall become settlers" who would maintain, clothe and feed them satisfactorily, and so became available to the emancipist settlers as well as to the marines and free settlers who had enjoyed the benefit of convict servants previously. Hunter's "Instructions" repeated those sections of Phillip's dealing with the shape and arrangement of land grants, but instead of reserving land between every two grants ordered that between every 1,000 acres of land allotted to settlers, a block of 500 adjacent acres be reserved for the Crown. The paragraphs containing instructions for the formation of "townships" and the reservation of land within them for the maintenance of the clergy and schoolmasters were unaltered.

Instructions identical to Hunter's were
Chapter 4.

subsequently issued to Governors King, Bligh, Macquarie and Brisbane. While the grants made to ex-convicts were generally within the limits set by the "Instructions" and seldom exceeded 100 acres, free settlers had received grants of as many as 3,000 acres and frequently obtained a number of such grants. Until 1817, settlers, their families and assigned servants, were supplied with provisions for a period of eighteen months after they occupied their farms, but from the 1st January 1817 the period was reduced to six months and in September 1825 the practice of victualling settlers stopped. Little trouble was taken in the placing of grants or in the reservation of Crown Lands. Oxley remarked that settlers were allowed "an almost uncontrolled right of selection" and reported that up to 1818, although some 177,500 acres had been granted to settlers, only 880

31. The "Instructions" are published in H.R.A. I, ii, 394-7; vi, 11-14; vii, 190-7; and x, 596-603.

32. See, for example, Oxley - Darling, 26 January 1826, and Macquarie's list of grants 1812-21: H.R.A. I, xii, 379-89; and x, 560-6.

33. G.G.O. 28 December 1816; and Proclamation 25 May 1825.

34. Oxley - Darling, 26 January 1826: H.R.A. I, xii, 380.
Chapter 4.

acres at Sydney and Parramatta had been reserved for the use of the church and schools, though some 12,000 acres had been granted to the Female Orphan Institution.\(^{35}\) Macquarie had granted more than 400,000 acres but had appropriated only 2,400 acres near the towns with resident chaplains for church and school glebes. Because of the number of grants given and the difficulties of the Surveyor General's Department, the reserves required by the "Instructions" were not made in Cumberland (although in laying out towns Macquarie had set aside land for a church, court house and other public buildings), but when the occupation of the extra-Cumberland districts began in Brisbane's administration, care was taken to reserve portion of the land in these areas for the Crown.\(^{36}\) In February 1822, Oxley was informed of the principles upon which the survey and settlement of the new districts was to proceed.\(^{37}\) All lands surveyed in the future were to be divided into townships six

\(^{35}\) Ibid, 379-80.

\(^{36}\) Ibid, 380. During his governorship Brisbane appropriated more than 1,068,000 acres of which 200,000 were Crown reserves.

\(^{37}\) Ibid, 380; and Goulburn – Oxley, 18 February 1822: C.S.L.M.P. October 1821-March 1822, p. 453.
Chapter 4.

miles square by parallel lines running true north-south and east-west (in actual fact magnetic bearings were used). Each township was to be divided into sections one mile square, four of which (2,560 acres) were to be reserved for the site of a village. As the survey of both the Hunter Valley and the Bathurst district proceeded, the surveyor-general was informed of the sections which were to be reserved. In transmitting Bigge's second and third reports, Earl Bathurst urged upon the governor the need to pay "particular attention" to the reservation of land for the clergy and schoolmasters and "strongly recommended" the division of the territory into Counties. This counsel was given greater force in his despatch of 1st January 1825, which ordered the division of the territory of the colony into counties, hundreds and parishes, the appointment of Land Commissioners, the reservation of land for "every object of public convenience, health or gratification", the granting of land to a Corporation to be established for the maintenance of churches and schools, and the sale of

38. See Goulburn's letters to Oxley in C.S.L.M.P. during the period 1822-6.

Chapter 4.

land to settlers. Apart from the land reserved in each county for roads, village sites, churches, parsonage houses, schools, burying grounds, and for the possible extension of villages, the provision of recreation grounds or the building of quays, Bathurst ordered that one-seventh of the area of each county was to become a Clergy and School Estate, vested in the Church and School Corporation for the support of the Church of England and the provision of schools throughout the colony. Except where it would be impracticable, the estate was to be granted in a single, unbroken tract. In the areas already occupied, it was impossible to do this, but as a portion of each township had been reserved for the Crown, these reserves were granted to the Corporation. In areas subsequently surveyed extensive areas were set aside for the


41. The reserves constituted one-ninth of the area of each township (four of thirty-six sections) a proportion not greatly smaller than the one-seventh recommended by Bathurst. But see Oxley - Darling, 26 January 1826; Land Board - Darling, 11 March 1826; Bathurst - Darling, 2 April 1827; and Darling - Murray, 11 February 1829: H.R.A. I, xii, 383, 410; xiii, 227; and xiv, 638-41. The grant transferring the reserves to the trustees of the Church and School Corporation was dated 3 February 1829.
Chapter 4.

Corporation: near Bathurst, for instance, two large areas were granted to them, one south of the town and between Campbell's River and Queen Charlotte Rivulet, and another on the northern side of the Belubula River; while in the Hunter Valley an area between the Australian Agricultural Company's grant and the Williams River was given to them. (See Maps 10 and 12).

Although Bathurst's instructions required the Land Commissioners to "have regard to all the great natural divisions of the territory" in establishing the boundaries of counties, hundreds, and parishes, only the counties were bounded by wholly topographic features. By the time these instructions reached the colony, the survey of the settled areas was well under way and the greater part of the Hunter Valley, the Bathurst district and Argyle had been divided into square "townships" containing thirty-six blocks one mile square (640 acres). These blocks had become the units on which the scale of land grants to free settlers was determined: for each £500 Sterling of capital he possessed the free settler could obtain a grant of one square mile. 42 And since

42. See Paragraph 10 of G.O. 5 September 1826.
Chapter 4.

this system of square miles was so firmly established, and as each "township" of 36 square miles was not so very much greater than the 25 square miles which Bathurst had recommended as the size of a parish, "townships" became "parishes" and the hundreds were never created. Except where major streams obtruded themselves into the pattern, straight lines (magnetic north-south and east-west) formed a grid within which settlement spread block by block: the foundation had been laid for the development of Australia's rectilinear cultural landscape which pays such scant attention to "the great natural divisions of the territory."
Chapter 5.

THE HUNTER VALLEY, 1789-1829

The Hunter River Valley, largest of the lowland plains on the New South Wales coast, was the first area outside the Cumberland Plain to be permanently occupied by white settlers. But the first "settlers" were neither agriculturalists nor pastoralists: they were the "worst description" of the Colony's convicts who spent their time cutting cedar and mining coal (and, if one is to believe some writers, being flogged). In this chapter, the major features of the valley's geography will be described, the events leading up to the establishment of a settlement at Newcastle outlined and the rural occupation of the valley first by convict small farmers and later by free agriculturalists and graziers will be discussed.

The Valley has two arms set at an angle of about 60 degrees and together measuring about 110 miles in length. The greater of the two arms, which will be referred to here as the lower Hunter Valley, runs in a
northwesterly direction for about 70 miles, and the smaller one, the Upper Hunter Valley, continues for approximately 40 miles in a north-north-easterly direction (See map 9). The lower part of the valley is bounded on the south by the northern scarp of the Hawkesbury sandstone plateau, and in the north by the high country referred to in Chapter 1 as the Barrington Ranges. This area consists of a complex arrangement of Carboniferous rhyolites, andesites, tuffs, agglomerates, conglomerates, shales and limestones, together with extrusions of Devonian granites and Tertiary basalts in the vicinity of Barrington Tops and the Mount Royal Range. It has been deeply dissected by a close network of streams almost all of which are tributary to the Hunter. The upper valley lies to the west of these ranges and separates them from the Merriwa Plateau which is capped by an extensive flow of Tertiary basalt overlying Jurassic sandstones and shales and Triassic sandstones and conglomerates. In the eastern scarp of this plateau there is a considerable amount of the Triassic exposed, but only a small area of the Jurassic has been revealed. Further west in the Collaroy-Cassilis-Green Hills district there is a much larger area of Jurassic, but for the most part the edge of the basalt is fairly
close to the Triassic sandstones and conglomerates which fringe the plateau and little of the Jurassic is to be found between them.

Both the upper and lower arms of the valley are floored by Permian strata which are the basis of the gently sloping foothills found between the alluvial flats lining the river and the ranges and plateaux bounding the valley. The most common of the Permian rocks are the sandstones, shales, conglomerates and coal-seams of the Upper Coal Measures. These are found in two sections: one lying to the south and west of the mouth of the Hunter; and the other occupying the whole of the valley above Singleton. Between these there is an area consisting for the most part of Lower Marine agglomerates, shales, tuffs and sandstones. Shales and sandstones (Triassic and Permian) are therefore the valley's predominating rocks and the parent materials from which the bulk of its soils have been formed, the shales giving rather heavy red-brown earths and the sandstones light sandy loams. All the soils are podsolized and many contain lateritic ironstone gravel. The alluvial soils of the Hunter Valley vary considerably in their nature, but they are without exception the richest soils in the
Chapter 5.
district and so were quickly taken up when the valley was made available to free settlers. Most are rather sandy and would best be described as fine sandy loams, or as sandy silts. Where they contain material washed from basaltic areas they are darker, somewhat heavier and richer than other alluvial soils. In the lower Hunter where they contain a higher proportion of clay, sandy clay silts and clay silts are found.

The Hunter River itself only occupies portion of the upper valley. Rising on the western side of the Mount Royal Range, it flows south-westerly in a fairly narrow but flat-floored valley cut into the Carboniferous, and at Aberdeen, having already been augmented by Page's River, enters the wider main valley whose northern part is shared by Dart Brook and its tributaries, Middle Creek and Kingdon Ponds.

Throughout the valley the Hunter follows a markedly meandering course, but it is only below its confluence with Rouchel Brook that it flows between alluvial terraces of any great extent though these line the river with but one or two small breaks for the whole of its length below this junction. The greatest areas of alluvium are on the upper part of the river between
Chapter 5.

Aberdeen and Alchering (about 8 miles below Denman), in the vicinity of Singleton (the original Patrick’s Plains), and along the whole of the river below Maitland. Within this last area there are some extensive permanent swamps especially on the western side of the river below Raymond Terrace.

The largest of the Hunter’s tributary streams is the Goulburn River which flows from the west to join it near Denman where the upper and lower valleys meet. The Goulburn and its tributaries drain the Merriwa Plateau on the north and the Triassic sandstone plateau on the south. The Goulburn itself flows in a fairly narrow U-shaped valley with wide alluvial flats in its floor and a very narrow foothill zone between these and the sandstone cliffs which edge the plateaux on both the north and south. Wollombi Brook, which joins the Hunter to the west of Singleton, is the largest of its tributary streams flowing northward from the sandstone plateau. Like the Goulburn it occupies a narrow U-shaped valley in the sandstone, but in the Permian it flows through a wide shallow valley floored with very extensive areas of alluvium. While there are comparatively few tributaries joining the lower Hunter from
Chapter 5.

the south, a large number flow from the north to meet it. Most of these are short, but several occupy quite wide valleys and flow through flood-plains of their own before reaching the Hunter. Foy, Fal and Glendon Brooks are the most notable of these (See plate 3) but the largest of the Hunter's northern tributaries are the Williams and Paterson Rivers. Both rise on the eastern side of the Mount Royal Range and join the Hunter near its mouth. Both occupy valleys which are divided by ridges into two distinct portions: an upper one which is fairly narrow and contains only small alluvial terraces, and a lower one abutting on and forming part of the greater Hunter Valley. The constriction separating the two portions of the Paterson's valley is at the town of Paterson, and that on the Williams at Seaham. The lower valleys of both rivers contain extensive flood plains which include high proportions of swampy land. There are, however, several swampy areas in the Williams valley above Seaham and in general its alluvial terraces are rather wider than those in the upper Paterson valley.

Along the coast between the mouth of the Hunter and Port Stephens there are areas of sand-dunes. Those along the shore are "living" while those further back
have become fixed and have developed a "humus podsol" soil, in which loose white sand is underlain by a hard-pan. This area carries a eucalypt forest.

The broad alluvial flats lining the Hunter were thinly timbered grassy plains which attracted the earliest settlers in the valley and so became the foci from which settlement spread. The most important of these were Nelson's Plains at the junction of the Hunter and William's Rivers, Paterson's Plains at the junction of the Hunter and Paterson, Wallis's Plains at the confluence of Wallis's Creek and the Hunter, and St Patrick's (later Patrick's) Plains in the large meanders of the river near the present site of Singleton. John Howe, discoverer of St Patrick's Plains described them:

"The land is very fine forest ground, thinly timbered, I think not exceeding from 4 to 6 trees to an acre, flooded though it does not appear high, generally about breast high and the highest place I saw (even on low ground) did not exceed 12 feet. In many places there is from 20 to 50 acres with not more than 20 to 30 trees on it. The flooded land continues from about \( \frac{3}{4} \) to \( 1\frac{1}{2} \) miles back from the river on each side (and more in places) and great parts of it equal Meddow Land in England."

Chapter 5.
The predominantly clay soils on the Upper Coal Measures country carried a savannah woodland similar to that of the Cumberland Plain, in which white and yellow box trees (*Eucalyptus albens* & *E. melliodora*), red ironbarks (*E. crebra*), white cypress (*Callitris glauca*), kurrajongs (*Brachychiton populneum*), spotted gums (*E. maculata*) and angophoras were widely spaced in grasslands dominated by spear and wallaby grasses (*Stipa* and *Danthonia* spp).

Both the Triassic Hawkesbury Sandstone and the Permian Upper Marine sandstone country carried a eucalypt forest with a suite of undershrubs similar to that described in Chapter 1. In the Carboniferous ranges on the north side of the Hunter, the diversity of rock types has produced a range of soil types which are reflected in a variety of plant associations. The valley floors usually have a woodland vegetation closely related to that found on the clay soils of the Upper Coal Measures, while the slopes bear a fairly close woodland or a mixed forest of eucalypts, cypress pines, angophoras and kurrajongs. In the higher, wetter, more protected valleys of the east a rain forest is found. Some of the rain forest trees, and especially cedar, appear to have been present in the forest on the banks of the Paterson
Chapter 5.

and, in places, the Hunter. The Paterson was, in fact, known for a time as "Cedar Arm". The basaltic soils of the Merriwa Plateau carried a woodland dominated by white box (*Eucalyptus albens*).

In June 1796, some fishermen, driven ashore near Port Stephens, found a considerable quantity of coal littering the beach near the (unnoticed) mouth of the Hunter River, which was discovered and named fifteen months later by Lieutenant John Shortland. After this two vessels, at least, visited the Hunter, one of which took on board a cargo of coal and cedar; and a third, intending to go to the Hunter, put into the entrance of Lake Macquarie in error. William Reid, the master of this ship, the 'Martha', was fortunate enough

2. Collins, Account, i, 484: and ii, 47-8: Hunter - Portland, 10 January 1798 (H.R.A. I, ii, 115-6 & 118); and Shortland - Shortland, 10 September 1798 (H.R.N.S.W. iii, 481).

3. See King - Portland, 10 March 1801 (H.R.A. I, iii, 14); Shipping Returns (Ibid, 128 & 130); and King - Banks, April-August 1801 (H.R.N.S.W. iv, 355).
to find coal there but his blunder is not forgotten: the entrance to Lake Macquarie is still known as Reid's Mistake. One of the ships to bring coal from the Hunter was owned by the Sydney merchant Simeon Lord who sold 150 tons of coal to the master of the 'Cornwallis' a convict transport about to return to Britain via Bengal.

During May 1801, bad weather in Bass Strait caused the surveying vessel 'Lady Nelson' to abandon her charting of the strait and Governor King took the opportunity of using her to take an exploring party to the Hunter River. The members of the expedition, led by Lieut Grant of the 'Lady Nelson' and Lieut-Colonel Paterson, Commandant of the N.S.W. Corps, were asked to report on "where the most eligible place would be to form a settlement, both with respect to procuring coals and for agricultural purposes." King also sent the

4. King - Banks, 28 September 1800: H.R.N.S.W. iv, 206. In June 1801, the pilot of the 'Lady Nelson' repeated Reid's error (see Paterson's and Harris's letters to King: Ibid, 414 & 416). Apparently both Reid and James, pilot of the 'Lady Nelson' mistook Moon Island off Reid's Mistake for Nobby's which lies in a similar position in relation to the mouth of the Hunter, though Nobby's (95') is much higher than Moon Island (45').

5. King's Instructions to Grant, 9 June 1801: H.R.N.S.W. iv, 390-1.
Chapter 5.

'Francis', a colonial schooner with the 'Lady Nelson' with orders to return to Sydney as soon as she could be loaded with coal and timber. Both vessels sailed about the 9th or 10th June, and the 'Francis' returned on the 27th with coal that was sold to the 'Cornwallis' for £3 per ton. King was elated at the prospect of an export trade in coal. The master of the 'Cornwallis' had arranged for a number of small privately owned boats to bring coal from the Hunter for him, and as Simeon Lord was about to send his vessel for coal which he intended exporting to the Cape of Good Hope, King issued an order promulgating the conditions under which cedar and coal could be obtained from the Hunter and fixing export duties on them. These expectations of a lucrative export trade and the preliminary reports which the 'Francis' brought from the Hunter led King to decide to establish a permanent mine and when the 'Francis' made her second voyage to the Hunter she carried a military guard to garrison the post and instructions for Paterson to choose the sites for a mine.

6. See King - Banks, April-August 1801 (H.R.N.S.W. iv, 359); King - Paterson, ? July 1801 (Ibid, 428); King - Portland, 8 July 1801 (H.R.A. I, iii, 116); and G.G.O. 27 July 1801 (Ibid, 259).
By the time the 'Lady Nelson' returned to Sydney on the 25th July, the party had made a reconnaissance survey of the lower part of the Hunter Valley. They had followed the river upstream for about 50 miles and had been about 25 miles up the Williams. They reported that all the land along the lower reaches of the river, with the exception of the hills on the south side of the river mouth (on which Newcastle now stands), was low, swampy and subject to flooding. The hills at the mouth of the river were well drained, had dark soils and were covered with fine grass, trees only being found on the floors of the valleys. Along the Williams [their Hunter] they found areas of fine forest land "but thinly

7. See Barrallier's, Paterson's and Harris's letters to King, 24 & 25 June 1801 (H.R.N.S.W. iv, 413-8) and King - Paterson, ? July 1801 (Ibid, 428).
8. Note that they regarded the Williams as the main stream and refer to it as the Hunter in their reports. The Hunter upstream from its confluence with the Williams they named the Paterson. Although the confluence of the (present) Paterson and Hunter was shown on their map, they did not explore it.
Chapter 5.

interspersed with lofty trees, and sometimes, indeed acres, without a tree, the soil in general being good, and the grass luxuriant." There was no cedar along the Williams, but they found uncommonly tall blue gums and casuarinas. The country along the Hunter itself [their Paterson] was more varied. Much of it was swampy and being subject to flooding considered unfit for cultivation, but there were areas of higher, well-drained forest-land and on the banks of the river many cedar, ash and box trees. The general conclusion drawn by Paterson was that:

"The two rivers may become objects worth the attention of Government, one for wood, and the other (Hunter's River) [i.e. the Williams], from the excellent soil in its neighbourhood and not subject to floods would in my opinion, be a very fit situation for forming a settlement for the cultivation of grain or grazing."

The small party left at the Hunter after the departure of the 'Lady Nelson' opened a mine near the present site of Newcastle and at first three miners and

six carriers raised about 3 tons of coal per day. Later when additional mines were opened production increased to about 9 tons a day from four adits penetrating 34, 31, 27 and 10 yards into the hillside. Some misconduct on the part of the commandant led to the withdrawal of the convicts in the early part of 1802 and shortly after this the military guard was also recalled.

Meanwhile the export of coal, which both Governor King and the Secretary of State for Colonies hoped would become a source of revenue and lessen the expense of maintaining the penal settlement in New South Wales, had failed. A cargo taken to the Cape of Good Hope had sold for only £7 per ton and masters of convict transports returning home via Bengal would not take coal for either Bengal or the Cape. But a number of small vessels—schooners and sloops—visited the Hunter during the succeeding years and brought both coal and timber

12. See: King – Banks, April–August 1801 (H.R.N.S.W. iv, 359); King – Portland, 21 August 1801 (H.R.A. I, iii, 169); Hobart – King, 29 August 1802 (Ibid, 566); and King – Hobart, 9 May 1803 (H.R.A. I, iv, 84).
Chapter 5.

to Sydney. 13

During October and November 1801 Governor King sent Surveyor-General Charles Grimes and Francis Barrallier to examine the Hunter valley more carefully than the party in the 'Lady Nelson' had done, and as a result of Grimes' report became convinced that the district "appears very ineligible for an agricultural settlement." 14 Besides examining both the Hunter and Williams which Grant and Paterson had explored, Grimes travelled up the "New River", presumably the Paterson, and found both cedar and "curradjong" growing more profusely there than elsewhere. Nowhere in his report does he mention any area being suited to agriculture, though he mentions evidence of the low lands being flooded, and the fine quality of the grass on some of the higher lands. But even though the agricultural prospects were not considered hopeful, King repeatedly asserted that he would reestablish a settlement on the Hunter when a

13. See the shipping returns in H.R.A. I, iv, 514 and 515.

suitable person to take charge should be available.\textsuperscript{15}

It was now hoped that as well as providing the colony with fuel, the coal might become the basis of an iron-working industry. But these hopes, like those for exporting coal, were vain.\textsuperscript{16}

Throughout King's administration, and, indeed, during much of Governor Hunter's also, the Irish convicts sentenced to transportation for sedition were a constant cause of anxiety. They rioted frequently, and made repeated attempts to escape.\textsuperscript{17} Soon after his arrival in New South Wales King had considered removing some of them to a new settlement to be formed at Port Stephens, but hesitated to do so because neither his civil nor military establishment was large enough to allow the detachment of a number adequate to staff

\textsuperscript{15} King-Hobart, 1 March 1804: H.R.A. I, iv, 486.

\textsuperscript{16} The hopes of producing iron were based on the widespread occurrence of lateritic ironstone gravel. A French mineralogist with the 'Naturaliste'-'Geographe' expedition who examined it when the expedition visited Sydney in mid-1802 considered that "it by no means yields a sufficiency of Metal to make the working of it an object." See H.R.A. I, iii, 572; and iv, 36 and 107.

\textsuperscript{17} See, inter alia, King's despatches in H.R.A. I, ii, 613 & 667; iii, 8-9, 57, 74 & 498. Also T. J. Kiernan's Transportation from Ireland to Sydney: 1791-1816 and Irish Exiles in Australia.
Chapter 5.
a new settlement. Following the Irish insurrection at Castle Hill and Parramatta in March 1804, however, he felt it would be prudent to separate the worst of the insurgents from their fellows (and the great body of convicts) and decided to banish them to the Hunter River. He was fortunate in receiving from Lieut Menzies of the Royal Marines an application for the post of commandant and was able to despatch him with 34 of "the worst description of the Insurgents" to form the settlement on the 28th March - less than a month after the rebellion. The new settlement was named Newcastle and a new county, Northumberland, was proclaimed. The settlement's population had increased to 128 (of whom about 100 were convicts) by September 1804, and remained fairly constant at slightly more or less than 100 until 1812 after which it grew steadily to reach 846 in

From its foundation until late in 1822, Newcastle was a penal settlement's penal settlement. Though the instructions given to its commandants stressed that "The principal object in view on the Original Establishment of a Post or Military Station at Newcastle having been to procure supplies of Coals, Timber and Lime for the service of Government..." the settlement served the secondary function as a place of punishment for those convicts committing crimes after their transportation to New South Wales. During Newcastle's time as a penal settlement, no real attempt was made to raise either crops or animals with which to victual its population. Some of the convicts cultivated gardens in their non-working hours and a government garden supplied the hospital and gaol (for Newcastle's own criminals).

21. See returns of population in H.R.A. I, v, 40, 102-3, 181-2, 508-9, 614-5, 666-7, 778-9; vi, 105-7, 139-41; vii, 280-1, 637-8; viii, 186-7, 599-600; ix, 90-1, 375-6, 722-3; and x, 286.

with vegetables. A small flock of sheep and a few head of cattle were kept to supply the hospital with fresh meat, but the usual ration consisted of salt pork from Tahiti and dry provisions - a diet which was responsible for the repeated outbreaks of both scurvy and dysentery among the convicts. Even after settlers commenced farming at Paterson's Plains in 1812, the ration remained the same and the Newcastle store was supplied with grain from Sydney although the settlers were producing grain which they were obliged to take to Sydney for sale.

The convicts at Newcastle were employed in mining coal, cutting timber, making salt (prior to 1808), burning lime (after 1808), and in general labouring work about the town, wharf and mines. Because of the skill required, only experienced miners were employed in cutting coal: these were generally sent straight to

Chapter 5.

Newcastle upon their arrival in the colony, and were not, like the great number of convicts there, serving colonial sentences. In fact, the majority of convicts in the settlement were engaged in unskilled work about the town, gaol, hospital and wharf, only a relatively small number of them being engaged in the production of coal, timber or lime (salt-making was abandoned in 1808 when lime-burning began).25

Throughout its history as a penal settlement a major problem at Newcastle was the prevention of escape. When the settlement was established it was hoped that distance from the settled areas, the hostility of the aborigines, the difficulty of obtaining food in the bush, and the unknown nature of the surrounding country would deter potential escapees. But despite the fact that several runaways were killed by the blacks, and that severe punishments were given those who were recaptured, repeated escapes were made. The majority of the escapees travelled southward along the coast to Broken

Chapter 5.

Bay and thence up the Hawkesbury to the farms near Windsor where many were hidden and employed by the settlers. By 1819 the frequency of escape was causing the government some concern for following John Howe's discovery of a route from Windsor to the middle-Hunter an alternative route became available to escapees and the numbers running from Newcastle increased. Macquarie reported to Lord Bathurst:

"... Newcastle now ceases to be of that Material Benefit, which it was formerly to the Principal Settlements at Port Jackson, as a receptacle for our worst Characters, in Consequence of the Interior having been Explored, and the Passage thence to Windsor on the River Hawkesbury having become known to several of those Persons who have been transported thither, and who now find little Difficulty in deserting from thence and returning to this Place."26

In London, Alexander Riley told the House of Commons Select Committee on Gaols that:

"... transportation to the coal-river has become lately very prejudicial to the colony; for the most desperate characters have made their escape from thence, and got round to the settlement on the Hawkesbury. It is considered that it will very shortly become a totally ineffectual mode of secondary punishment."27

Chapter 5.

Macquarie was already aware of the growing need for an area in which to place free settlers and was considering both the Hunter Valley and the Jervis Bay-Shoalhaven delta area as possible sites for new agricultural settlements. Of the Hunter Valley he wrote to Earl Bathurst:

"Extensive Plains of rich and fertile Land being found at no great Distance along the three principal Sources of the River Hunter, ... and the access to them by Means of the River being rendered still more easy in Consequence of the large Quantity of Timber fallen there for the Consumption of this Place, these Plains now become an Object of Valuable Consideration in the Necessary Increase of the Population, and hold out important Advantages for the Establishment of Free Settlers upon them.

If a more Remote Situation were discovered to the Northward of Newcastle, with a safe Harbour, where Prisoners could be transported to and secured against Desertion... I conceive it would be highly expedient to remove the Convicts and others under Colonial Sentence from Newcastle thither, and in such Case it would be no less Judicious to establish Settlers on the Plains along the River Hunter, where they would have the Combined Advantages of a fertile Soil of Comparatively easy Cultivation, and the Benefit of Water Conveyance for their Produce to Newcastle, and thence by Sea to the Principal Mart of Sydney." 28

Oxley had already discovered "a more Remote Situation" suitable for a penal settlement at Port Macquarie, and

Chapter 5.

this together with his opinion that the Jervis Bay-
Shoalhaven area was unsuitable for settlement led
Macquarie to decide to transfer the penal settlement to
Port Macquarie and to open the Hunter Valley to free
settlers. While arrangements were being made for the
settlement of Port Macquarie, the first free settlers
were allowed to go to the Hunter and with their advent
the situation in the penal settlement worsened. A
party coming overland with cattle had blazed trees along
their route making it more obvious, and convicts began
to leave the settlement in groups one of which even
posted "inflammatory placards" in the town before quit-
ting it.29 And after a small settlement had been estab-
lished at Port Macquarie the transportation of captured
runaways thither proved no deterrent: some convicts at
Newcastle even expressed a desire to go there believing
that in the infancy of that settlement they would enjoy
greater freedom than at Newcastle.30 During 1823 the
majority of the convicts at Newcastle were moved to
Port Macquarie, only a sufficient number to work the

30. Ibid.
Chapter 5.

mines, cut timber, man the timber yard and wharf, and perform necessary services about the town being retained there. Thus, by the end of 1823 Newcastle had assumed a new role: waking from the "dead sleep of insane criminality" it had become the centre and port of a rapidly developing area of agricultural and pastoral settlement.

But the rural settlement of the Hunter valley had begun about a decade before this. It would appear that soon after Governor Macquarie's visit to Newcastle in January 1812, four well behaved convicts were placed on farms at Paterson's Plains. There does not appear to be any record of the actual time of their occupation of the farms but it seems most likely that Macquarie gave orders for them to be placed at Paterson's Plains during his visit. Certainly they were in possession by May 1813 when two of them obtained permission to visit Sydney. In both 1817 and 1818 additional settlers were allowed farms so that by the time of Macquarie's visit to the area in July 1818 there were eight farms, two occupied by free men and six by convicts.31 The

conditions under which the farms were held were mentioned in an Order published by the commandant at Newcastle in March 1818, in which the farmers were warned that:

"... they are not to regard the land so given them their own Property, the right being exclusively vested in the Governor, and that they are only allowed to cultivate, and to reside on their Farms so granted during their good conduct and the pleasure of His Excellency the Governor, they will therefore be very careful in observing that propriety and Correctness of Conduct which may ensure them a continuance of the Commandant's favour."[32]

When Macquarie visited these farms he was pleased to find "...the soil of all of them very good and much more ground cleared & cultivated then I had any idea of."[33]

In 1818 a number of farmers were given land at Wallis's Plains and after that, more new farms were established in both places. By 1820 there were 12 farms on Paterson's Plains and 11 on Wallis's. Three of the farmers were free men in the government employ at Newcastle (the assistant surgeon, storekeeper, and chief constable) and two sons of government officers in Newcastle: the remainder were convicts holding their

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33. Macquarie, Journals of Tours, p. 131.
Chapter 5.
farms during the Governor's pleasure. Both settlements had a constable and a detachment of four privates to keep order and defend the settlers from the blacks should the need arise, but on the whole relations with the aborigines appear to have been good. At times they assisted with the work for a short time and often helped with the harvest though they do not appear to have considered that the settlers had any exclusive right to the crop. The Commissariat store at Newcastle was supplied with grain and flour by Sydney contractors and as there was no other market for grain in Newcastle the settlers generally took their produce to Sydney for sale though occasionally they were able to exchange some of it for provisions and clothing in Newcastle. There are records of their grain being received into the Newcastle store on only two occasions: one in 1817 and one in 1818.\textsuperscript{34} They used hoes, not ploughs, in the cultivation of their land and grew potatoes, wheat, corn (maize) and barley. One of them told Commissioner Bigge that he only obtained 12 bushels (of wheat, presumably) per acre from his farm though others got between 15 and 20. The

\textsuperscript{34} See Wallis - Campbell, 22 October 1817 and 2 April 1818: \textit{C.S.I.L.} Newcastle (10-12), 94 and 116.
farmers at Wallis's Plains suffered partial losses of their crops when the river rose in flood: in March 1819 the whole of Wallis's Plains was under water, but only one farmer's crop was completely destroyed.\textsuperscript{35}

The presence of the settlers close to the penal settlement appears to have hastened the decline in its usefulness: they were suspected of aiding escapees by sheltering them and providing them with food and by even employing them for a time. One party of cedar cutters sent to cut timber near Wallis's Plains took themselves off on Howe's track to Windsor having first supplied the settlers with timber and sold their tools to them.\textsuperscript{36}

Morisset, the commandant at Newcastle, felt that he would have to "bring some of them [the settlers] off their

\textsuperscript{35} Morisset - Campbell, 19 March 1819: C.S.I.L. Newcastle (13-15) unpaged. The description of the farms in this paragraph is based on the evidence given by Major Morisset, commandant at Newcastle, and John Allan one of the settlers at Wallis's Plains before Commissioner Bigge: see B.T. 1, 444-82 and 501-512.

\textsuperscript{36} See Morisset's evidence before Bigge and his letter to Campbell, 6 July 1820: B.T. 1, 444ff, and C.S.I.L. Newcastle (13-15), unpaged.
farms as the only means of putting a stop to the prac-
tices so detrimental to the discipline of this place." But he does not appear to have done so.

Though John Allan, one of the settlers at Wallis's Plains told Bigge that the farms there fronted the river and ran back for 120 rods, the farms do not appear to have been laid out with any regularity in size or shape. When the time came to grant land in the Hunter Valley it became necessary to make some permanent arrangement for these settlers, and to regularise the boundaries of the farms so Henry Dangar, the surveyor working in the Hunter Valley, was asked to make a survey of them. His report gives detailed information on them and is valuable as one of the few documents giving an account of the farms of small-holders. He found that the 22 farms ranged in size from 11 to almost 60 acres, the greater part of all but one being subject to inundation. Trees had been felled on most of the farms, but

all the stumps had not been removed. Dangar noted only two farms with "no dead trees standing or dead wood on the land." (Unfortunately he did not record the area of crop-land on the farms, nor the crops which were being grown). Most of the farmers lived in wattle and plaster cottages: only four had built more substantial weather-board houses - three had shingled roofs and one a thatched roof - and one lived in a "log hut". All had barns and huts for storing grain, and almost all kept pigs (their sties and yards were valued). As only nine settlers are listed as possessing stock-yards, cow-sheds or paddocks it would appear that only about half of them kept cattle. Three had stables, but in a climate where horses do not really need them, it is not safe to conclude that only three owned horses. Practically every farm had its garden and peach orchard. But here are the details of three farms: two of these were fairly typical, and the third was the biggest and most improved of all. John Allan and George Mitchell worked farms of 38 and 44 acres respectively. Only three acres of Allan's farm were not liable to inundation but all of Mitchell's might be flooded. Allan lived in a log, weatherboarded and thatched cottage valued at £12.10.0, and had a log and
thatched barn, log huts, a stable, pig yard and an orchard of 80 peach trees. Mitchell's cottage was of wattle and plaster partly weatherboarded. His frame and wattle barn measured 70 feet by 18, and he had a small garden, a peach orchard and a pig yard. Richard Binder had the largest farm of all - 59 acres, 20 of which were not inundated and all of which were "in a good state of cultivation". His house was a weatherboarded and shingled cottage, and he had also built a cowshed, stable, lumber-house and a log-and-thatched barn. His pigsties, pig yard and cow yard formed part of the three-railed fence enclosing a ten acre paddock. There was, incidentally, little fencing on these farms: apart from the stock and pig yards there were only 68 chains of fence on them - half of this was on Binder's farm and the remainder on three others. The greater part of the cropland as well as the gardens and orchards would therefore appear to have been unfenced, a further indication that few cattle were kept.

Following Dangar's survey, it was decided to transfer some of the farms to another site so that the remainder could be enlarged and provided with boundaries fitting into the regular square pattern within which
lands were being granted.\textsuperscript{38} The settlers were offered the choice of removing to the Williams River where they would be given grants of 100 acres and assisted to bring their new farms into a state of development comparable to that of the farms they had abandoned, or of remaining on enlarged farms which would be held under lease at a rental of half a Spanish dollar per acre.\textsuperscript{39} Some agreed to move and occupied farms near the present site of Clarence Town, while others remained on their original farms and became tenants of the Church and School Corporation when the land they farmed was granted to it in 1829.\textsuperscript{40}

The free settlement of the Hunter Valley can

\textsuperscript{38} For a summary of the events connected with the original occupation of the small farms and subsequent transactions concerning them see the Colonial Secretary's letter to the Trustees of the Church and School Corporation, 30 March 1830: Church and School Corporation Papers, Paterson's Plains 1827-31, pp. 57-58 (M.L. A1555).


\textsuperscript{40} The documents in the Church and School Corporation Papers, Paterson's Plains 1827-31 (M.L. A1555) give details of some of the later history of the small farmers.
be said to have commenced in September 1820 when John Howe, discoverer of a route from Richmond to the Hunter River, was given a permit to graze stock on St Patrick's Plains until such time as a grant of 700 acres could be marked out for him there. During October and November 1818, Howe, who was chief constable at Windsor, had made an exploratory journey and discovered a large river which lay, according to his estimate, about 105 miles north-north-west of Windsor. He later sent out a party of natives who returned having found a shorter and better route to the river, and in March 1820 made a second visit to the river at Macquarie's request. On this occasion he came upon the river lower down-stream than previously, and followed its course until he reached


42. Howe's Journal together with his letters to Macquarie describing his journeys are bound as Journal of J. Howe, M.L. 0330.
Chapter 5.

Wallis's Plains, so proving it to be the Hunter. The country along the river he described as being:

"as fine a country as imagination can form, and on both sides of the River for upwards of 40 miles (I may say) will at least average two miles wide of fine grazing land fit for cultivation and equally so for grazing, tho (except in a few places) there is more timber than on that part I made in November last, tho much thinner than on the banks of the Hawkesbury, or in the neighbourhood of where we now are Wallis's Plains ...."

The grazing permit and promise of a grant were Howe's reward for these explorations.

Howe had reported to the governor that a road usable by cattle could be made with trifling expense but it was some time before it was used for stock – escaping convicts, however, found it most convenient. The Newcastle chaplain, Rev. G. A. Middleton, appears to have been the first to obtain permission to use the route. He travelled from Richmond in a fairly direct route to

43. See Howe - Macquarie, 21 March 1820; and another letter written later, both of which are quoted by James Jervis in R.A.H.S.J. xxxi (1945), 277-9.
Chapter 5.

Wallis's Plains and thence to Newcastle during 1821. Shortly after this an unauthorised party following Middleton's track blazed trees along the way thus further assisting any runaways en route to the Hawkesbury and incurring the displeasure of both the governor and the commandant at Newcastle. A Government Order was promptly published notifying Macquarie's "express Desire, that this Irregularity [travelling without a permit] may not again occur." And in December, the commandant, reporting that twelve convicts had gone off together for the "Parson's Road", hoped that no more permits would be given for cattle to be brought overland.


46. G.O. 6 October 1821.

47. Morisset - Goulburn, 18 December 1821: loc. cit.
Chapter 5.

But only a few days later, a notice which must have disquieted him appeared in the *Sydney Gazette*:

"St Patrick's Plains - Mr B. Singleton begs leave to inform the Public, that he will take charge of any Person's Cattle at the above mentioned Plains. Terms 10s a head per annum; taken for no less period than three years. Apply at Kurry Jung Mill. N.B. - Responsible for any number which may be entrusted to his charge.""^48

Like Howe, Benjamin Singleton had been exploring northwestwards from Windsor and Richmond in 1818. In the hope of reaching Bathurst he had travelled an estimated distance of 120 miles on a course 30° west of north, but though he made no discovery of note, he returned having been told by the natives of a large river to the north-east which was apparently salt and tidal, and thought to empty into Port Stephens."^49 This was the river subsequently discovered by Howe and proved to be the Hunter. Singleton also accompanied Howe on his second journey to the Hunter, and whether or not Singleton, like Howe, had received a grazing permit, or

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48. S.G. 22 December 1821.

Chapter 5.

whether he was using Howe's land is uncertain. He was later given grants of land at Patrick's Plains but there is evidence that he may have been acting as Howe's agent.\(^{50}\) But whoever the principal, the fact remains that during 1822 a number of people and a substantial number of sheep and cattle were living on Patrick's Plains. In October 1822, Morisset had reported to the Colonial Secretary that several families were established there, had planted a crop of wheat and were maintaining a regular intercourse with the settlers at Wallis's Plains.\(^{51}\) He asked if these people had been given permission to settle on Patrick's Plains and expressed the hope that no further permits would be given. He visited the district in February 1823 and found "as much regularity as could be expected in a distant settlement" but

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\(^{50}\) In January 1823, James Mudie, a free settler occupying land at Patrick's Plains complained that there were several people "even now convicts" there and that they had about 1,200 cattle and 1,000 sheep as well as pigs and horses, and that they paid Howe [who was still resident in Windsor] a grazing fee of ten shillings per head. See Mudie - Goulburn, 25 January 1823: C.S.I.L. Newcastle (19-21), 12ff.

for security appointed Benjamin Singleton a district constable. Finding that the road between Wallis's and Patrick's Plains was well marked, and believing that the way to Richmond was now so obvious that escapees would have no difficulty in following it, he suggested that it should be opened to persons obtaining a permit to use it and that a watch be kept for runaways along it. In the meantime he intended sending the known potential escapees to Port Macquarie. A Public Notice published on the 5th March 1823 announced that "The road from Richmond to Wallis's Plains is open for the Public" and that those wishing to use it should apply for permits. Copies of the permits which were issued are to be found in the Colonial Secretary's Letters to Miscellaneous Persons. They indicate that settlers stocking Hunter Valley properties brought their sheep and cattle into the district that way, and also that Singleton's agistment business must have been flourishing - quite a large number of permits mention that the stock was being taken to "graze with Mr Singleton's at Patrick's Plains."

Chapter 5.

While this semi-official occupation of the middle Hunter was proceeding, a more formal and systematic settlement of the lower part of the Hunter Valley was taking place. In February 1822 Morisset was informed that the settlement of the valley was about to commence: the Colonial Secretary wrote:-

"A variety of free settlers having lately been permitted to proceed to Newcastle for the purpose of inspecting the lands in that neighbourhood, and His Excellency having received many pressing entreaties for the location of land, the assignment of servants and other indulgences:- in consequence thereof, I am directed by Sir Thomas Brisbane to assure you of his intention not to accede to any of these without they come backed by your approbation. At the same time however, I am commanded to convey to you His desire that these Gentlemen be afforded every assistance constant with the good of His Majesty's Govt., and all such indulgences as can be allowed them without prejudice to the rules of the place: which must still be considered as the place of punishment until Port Macquarie be ready to relieve from that Office the settlement at Newcastle."\(^{53}\)

Oxley had already been informed of "the intention of his Excellency to give orders for the location of Land in the vicinity of Newcastle"\(^{54}\) and on the 1st March gave


\(^{54}\) Goulburn - Oxley, 18 February 1822: C.S.L.M.P. October 1821-March 1822, p. 453.
Chapter 5.

one of the assistant surveyors, Henry Dangar, instructions for the survey of the Hunter Valley. The country was to be divided into one-mile squares, and the three settlers who had already chosen their location were to have their boundaries fitted into the grid, no one person having a frontage of more than one mile-square block on the river. Another settler was to have 1,200 acres measured for him, and the convict farmers already established were to be instructed to submit memorials to the governor giving the particulars of the claims they made for land on the basis of Macquarie's promises to them.55

Though there were already four people who had chosen situations for their farms when the survey commenced, settlers did not begin to arrive in the valley in great numbers until 1823. A list of settlers who had been allowed assigned servants published in April 1823, contained only 31 names of which 21 were those of the convict small farmers.56 These settlers were those

Chapter 5.

who were due to pay the government in grain for the provisions and clothes provided for their servants in the period ending 31st December 1822, and the list therefore shows that up to that time, only ten new settlers had actually occupied and begun to work their land with the assistance of convict servants. The fact that settlers did not arrive in numbers until 1823 is further emphasised by the muster figures which show a rapid increase in the numbers of non-convict adult males (who can be regarded as potential settlers though clearly not all of them would have been settlers) between 1823 and 1825.57

Since those who were given orders for land grants were asked to choose situations within the

57. The number of adult males who were free immigrants, born in the colony, ex-convicts (of all kinds) and convicts holding tickets-of-leave increased: 1822 - 36, 1823 - 102, 1824 - 229, and 1825 - 392. (Figures from N.S.W. Returns for 1822, 1823 and 1825 and the Return of Population 1824 in C.S.I.L. 22 (54-89), 140.)
Chapter 5.

surveyed area, the pattern of the valley's occupation corresponded with the progress of Dangar's survey, but in general the most sought, and so the first occupied, locations were on the widest parts of the alluvial flats lining the river. Of these the more lightly wooded parts were preferred but alluvial soils were not neglected even though they carried a dense growth of quasi-rain-forest. Thus the earliest settlers clustered on Paterson's, Wallis's and Patrick's Plains, and the later ones spread along the river between these nuclei. Though much of the land along the Williams, and especially Nelson's Plains near its junction with the Hunter, was in no way inferior to that on the Hunter or Paterson, many settlers inclined to take up land there were deterred by its "unprotected state": it was close to Port Stephens where there was a concentration of natives, and it lay on an overland route already frequented by escapees from Port Macquarie making their way to the settled districts. It was not until a military

58. See, for example, Goulburn - Underwood, 15 May 1822, in which Underwood is informed that he might receive a grant in "any unappropriated spot already surveyed by Mr Dangar." C.S.L.M.P. March-June 1822, p. 20.
Chapter 5.

post offering some protection from these two menacing groups had been established at Nelson's Plains that land along the "First Branch" (Williams) was taken up. By 1825 almost the whole of the alluvial lands and much of the more attractive areas flanking them had been occupied or appropriated. (See Map 10 which has been adapted from Dangar's Map of the River Hunter... and shows the area granted or ordered to be granted prior to the end of 1825. Not all the area hatched on the map was occupied at this date, but it would all have been appropriated by settlers preparing to occupy it.) Almost the whole length of the river from its mouth to the broad valley of Dart Brook, Kingdon Ponds and Page's River had been selected for farms, the only gaps being at the swamps on both sides of the river about 10 miles upstream from Newcastle, and on the section of the middle Hunter between Fal Brook and the Goulburn River where two breaks marked places having only narrow, discontinuous patches of alluvium. Besides taking up land

Chapter 5.

along the Hunter, settlers had also chosen land in the lower parts of the valleys of the Williams and Paterson Rivers, and of Glendon, Fal and Foy Brooks, but had not yet fancied the narrower upper valleys of these streams which are so deeply incised in the Carboniferous. Though much of the flat-floored, cliff-capped valley of Wollombi Brook had been selected, almost identical country on the lower Goulburn was neglected: possibly the fact that the road between Richmond and Patrick's Plains passed through the Wollombi valley made it a more attractive situation than it might otherwise have been. The only areas at any distance from the Hunter or one of its major tributaries which were appropriated lay to the south of the Hunter between Wollombi and Wallis's Creeks. One included the alluvial soils on Coongewai Creek and in the small closed basin draining via Ellalong Creek into Ellalong Swamp (near Paxton on Map 3). The other was in that part of the valley of Black Creek running through an area of Lower Marine agglomerates and shales (near Rothbury on Map 3).

Between 1825 and 1830 the pattern did not change very much. (See Map 11 which shows the appropriated area in 1830). In the north-east the Australian
Chapter 5.
Agricultural Company had begun operations in a huge grant extending north from Port Stephens, and another large area between this and the Williams River was given to the Church and School Corporation which had also received many of the small reserves originally intended for villages. The area appropriated for settlement had increased considerably. It had been extended further up the valleys of the Paterson and Williams Rivers, and of Fal Brook, and the breaks in the line of farms on both sides of the Hunter between Fal Brook and the Goulburn had been closed. The most significant changes had taken place in three places to the south of the Hunter. Quite extensive areas were taken up between Wollombi Brook and Black Creek; in the common headwater region of Ellalong, Black and Wallis's Creeks; and in the country between the lower course of the Hunter and the northern end of Lake Macquarie. Within each of these districts the soils are derived principally from the sandstones and shales of the Upper Coal Measures and Upper Marine Series, and though there are no extensive alluvial soils, the narrow ribbons of alluvium lining many of the creeks provide areas of soil which is better than the clayey or sandy soils of the greater part of the
surrounding country. Although the bulk of the reserves originally made for village sites had been given to the Church and School Corporation, a number were retained for eventual subdivision into town allotments.

Newcastle was already a town of sorts in its convict days. During Macquarie's administration its streets had been marked out and a number of public buildings including "A very handsome Church, capable of containing upwards of 500 Persons, with an elegant Spire" had been built. In July 1822, Bingle and Dillon, a firm of Sydney merchants, were given a town allotment in Newcastle on which to erect a store, and following many requests from both settlers in the Hunter Valley and Sydney business men for sites for houses, stores or business premises in the town leases of allotments were

made available from June 1823. Early in 1825, Thomas Scarr was allowed a licence to establish a brewery in Newcastle and Francis Beattie obtained two allotments for the construction of "a commodious inn, stabling and outhouses." Despite these signs of its growth, Newcastle does not appear to have been an impressive town: Peter Cunningham, who visited it [probably during 1826] remarked that:

"Few except the government-houses are worthy of much notice, being chiefly small detached cottages of brick or wood, ... but, from the thriving settlements upon the banks above, the attention of our merchants has of late been more particularly directed to Newcastle, and wharfs and stores are now in progress, to facilitate and extend its rising commerce."

61. See Bingle & Dillon’s Memorial, 13 June 1822; Goulburn - B & D, 23 July 1822; and Goulburn-Oxley, 23 July 1823: C.S.I.L. Newcastle (16-18), unpaged; C.S.L.M.P. June-November 1822, 72-3. The first of the leases given after sites became generally available was taken by A.B. Sparke, a settler, in June 1823 – see Goulburn - Sparke, 26 June 1823: C.S.L.M.P. March–August 1823, p. 583. Subsequent permits to select and lease a town allotment in Newcastle are in this and the succeeding volumes of C.S.L.M.P.


63. P. Cunningham, Two Years in N.S.W. i, 139.
Chapter 5.

But although Newcastle was becoming a commercial centre and had in 1823 ceased to be a penal settlement, it was not until the beginning of 1827 that it came under civil government with the abolition of the post of Commandant and the appointment of a Police Magistrate. There had already been some confusion and difficulty respecting the relative authority and powers of the Commandant and the Magistrates appointed in the settled districts, and early in 1826 Allman, then Commandant, had drawn attention to the changed character of Newcastle and the need there for a Police Magistrate:

"...this district having changed its character from a penal to a free settlement nearly eighteen months back, it became necessary to establish a police office: and that in consequence I have performed the duties of a Police Magistrate...."

The discontinuation of the commandancy marked the

64. G.N. 25 January 1827. Francis Allman, who had held the position of Commandant and had acquired land in the Hunter Valley on which he proposed to settle, was Newcastle's first Magistrate. See comment in the Monitor and a defence of Allman in S.G. 30 January 1827.

removal of the last vestige of Newcastle's penal character: with the appointment of a Magistrate it assumed the dignity of a free town.

Meanwhile two other small urban centres were appearing in the Hunter Valley - one at Wallis's Plains and the other at Patrick's. A Government cottage in which prayers were read on Sundays, had been built at Wallis's Plains soon after the first settlers were placed there, and later when a small military detachment manned the post it could be said that two urban services were provided there though no real village existed. While the number of settlers was small there was little need for other facilities but when free settlers began to arrive in numbers, bringing with them all kinds of implements, furniture and provisions, the need for a wharf and store (communication with Newcastle was still primarily by river) at Wallis's Plains became more pressing and one settler offered to build and maintain a "house for the public accommodation" on the Crown Reserve there. 66 A little later a service of a rather different kind was

Chapter 5.

requested: the Magistrate asked that a constable and scourger be appointed so that he would no longer have to send recalcitrant assigned servants to Newcastle for punishment, a procedure which was often difficult and inconvenient. About the same time the magistrate complained that magisterial business was taking up so much of his time that he was forced to neglect his farm and frequently had to use his own assigned servants as constables. The country, he said, was "over run with free men, sawyers and fencers who never agree with their employers in their contracts" and took up a great deal of his time in making depositions. Clearly Wallis's Plains was becoming a populous, if troublesome, locality. In July 1824 a regular passage boat began to ply the river between Newcastle and Wallis's Plains. Previously the settlers appear to have used boats of their own or hired them, but now a regular weekly service became available to them. Later that year Governor Brisbane

69. Advertisement in S.G. 29 July 1824 [and subsequent issues].
Chapter 5.

ordered the construction of a "carriage road" between the two centres but it does not appear to have been made with any alacrity: Peter Cunningham describes the route as "a plain beaten path leading ... through the woods." The first building allotment to be given at Wallis's Plains appears to have been that granted in May 1825 to George Lynch, though later in the same year a firm of Sydney merchants, Powditch and Boucher, were informed that they could not be given one, "The arrangements necessary to establish a town at Wallis's Plains not being complete." Powditch and Boucher, however, had already appointed an agent at Wallis's Plains and had stated in an advertisement that their boat the "Comet" would carry goods and produce on the river at moderate terms. Peter Cunningham's visit to the Hunter Valley would have been made about this time and from his description it would appear that Powditch and Boucher's

70. S.G. 25 November 1824; Peter Cunningham, Two Years in N.S.W. i, 141.
73. S.G. 14 November 1825.
store was the only business venture established at Wallis's Plains:

"There is a government-house at Wallis's Plains, and a guard-house with three soldiers fixed here too.... A deep rivulet runs through the Plains, over which you cross in a ferry-boat, and proceeding along its banks, toward the main river, past various houses belonging to poor settlers, you come to Messrs. Powditch and Boucher's store, ... where a good supply of all sorts of merchandise is kept."74

The ferry-boat was replaced by a bridge in 1827.75 In many respects Wallis's Plains was a far more convenient centre for settlers on the Hunter than was Newcastle: it lay within the settled area whereas Newcastle was not only at one end of the valley, but also separated from the bulk of the farms by the swamps along the lower course of the Hunter. The first official recognition of this fact was made in 1827 when the Court of Requests met at Wallis's Plains instead of at Newcastle, and in 1829 Quarter Sessions were also moved from Newcastle.76 The little township at Wallis's Plains had by this time

74. Peter Cunningham, Two Years in N.S.W., i, 141-2.
75. S.G. 17 September 1827.
76. G.N. 27 November 1827, and Proclamation 21 October 1829.
Chapter 5.

received a name, Maitland, though it had still to be laid out.77

The "township" at Patrick's Plains was rather more embryonic than real, but none the less a centre. Benjamin Singleton had opened the "Plough Inn" and there was a ferry-boat "capable of conveying carts and heavy articles across when the river is up."78 (The main road up the Hunter Valley led from Wallis's to Patrick's Plains along the south of the river, crossed it at Patrick's Plains and continued to the north-west meeting it again at Muscle Brook, present site of Muswellbrook.

77. The "List of Towns and Stations" published with G.N. 1 June 1829, contains the following entry:-

"Maitland ... A Town to be laid out at the Head of the Navigation of the Hunter's River, [blank] Miles from Newcastle."

The name Maitland was used in the Proclamation of 21 October 1829. The omission of the distance from Newcastle in the "List" suggests that even in 1829 the road was yet to be marked and measured. The name "Wallis's Plains" does not appear in the "List".

78. Peter Cunningham, Two Years in N.S.W. i, 143-4; also X.Y.Z. "Rambles in New South Wales" in Henry Colburn's New Monthly Magazine and Literary Journal, xxii, 236-47.
Chapter 5.

See Map 10). Singleton's Inn must have been a well known place, for in 1829, Patrick's Plains were described simply as "On Hunter's River, at Singleton's Inn."\(^79\) No wonder that the town which was later formed there took the name Singleton!

Of all the areas of new settlement, the Hunter Valley was by far the most important: by November 1828 when the Census was taken it contained 55% of the colony's alienated land (that is including the 1,000,000 acre grant given to the Australian Agricultural Company), 9% of its population or slightly less than half the population outside Cumberland, 16% of its cultivated land (a very much higher proportion than in any other district except Cumberland), almost 24% of its sheep (twice as many as in Cumberland) and 18% of its cattle.\(^80\) Though both Argyle and Bathurst contained more sheep and cattle, neither was cultivated to any extent, nor did they contain any significant proportion of the colonial population though both had been opened to settlement

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79. See the "List of Towns and Stations" in G.N. 1 June 1829.
80. See Appendix 10.
before the Hunter Valley. The more rapid development of the Hunter is explained by the facts that the Hunter was, in many ways, a far more attractive district than any other, and that it received a rather different type of settler to the other newly settled areas.

Among the natural advantages of the Hunter Valley were its great extent of alluvial soils (the only kind the early settlers considered worth cultivating) and the availability of water carriage not only from Newcastle to Sydney, but also between the river-side farms and Newcastle. This last was particularly important: while loaded drays might take as many as eighteen days to reach Bathurst, the voyage to Newcastle could be made in twelve hours except in bad weather. Freight was carried to Newcastle for £1.6.0 per ton but the coach running to Bathurst charged £1.0.0 per hundred pounds.  

81. Mrs Hawkins' journey to Bathurst with loaded drays took eighteen days (See Chapter 6), Peter Cunningham's voyage to Newcastle, twelve hours (Two Years in N.S.W. i, 135). For freight charges see advertisements in S.G. 11 March 1824 and 14 April 1825.
market agricultural produce from both Bathurst and Sutton Forest profitably (See Chapters 6 and 7), but the small settlers in the Hunter had been able to sell theirs in Sydney at a profit. Thus the Hunter offered its settlers a choice of activity (agriculture and grazing) while the interior districts were only potential grazing lands. And the overland route to the Hunter via either the Bulga Road between Windsor and the Wollombi, or the "Parson's Road" from Wiseman's Ferry to Wallis's Plains was neither more nor less difficult for stock than the roads to Bathurst or the Goulburn Plains. Thus the Hunter, the last of the new districts to become available to settlers, was by far the most attractive and so drew to itself many of the free immigrant settlers who arrived in New South Wales during the 1820's.

The difference between the type of settler in the Hunter Valley and those in the other districts was largely the result of the later opening of the Hunter Valley. It has already been shown in Chapter 3 that the need for new land which arose during Governor Macquarie's administration was more the need of established
pastoralists for new pastures than a need for farming land upon which to place new settlers. Macquarie met this need by allowing graziers access to the south-western districts and, on a more limited scale, the Bathurst area. By the time the Hunter Valley became available the bulk of the "local demand" for new land had been satisfied. The colony's established settlers had arable farms in Cumberland and grazing runs in either the western or south-western districts, and being established in these new areas had little desire to take up land in the Hunter Valley - a few did move, but on the whole those already established at Bathurst or in Argyle retained their runs there. Newly arrived settlers, however, being unable to obtain extensive tracts in Cumberland naturally preferred the Hunter Valley to the other districts, especially those who planned to raise crops as well as breed sheep or cattle. Though many of the new settlers did take up land in the western and south-western districts the majority of them elected to go to the Hunter Valley, so that by the time of the 1828 Census the population structure of the Hunter Valley was markedly different from that in any other newly settled area. Of the valley's non-convict, adult, male
Chapter 5.

population (that is the section of the population which could be regarded as possible settlers) almost 43% were free immigrants. This contrasts with the proportion in the other districts quite strongly: Cumberland 21%, Argyle and St Vincent 19%, Bathurst 23%, Camden and Illawarra 26% and the whole of New South Wales 24%. Men born in the colony and ex-convicts (both free-by-servitude and pardoned), on the other hand, constituted a considerably smaller percentage of its men than they did in other districts. This difference is the prime reason for the valley's great development: while other districts were occupied as grazing runs by Cumberland settlers, their sons, former convicts, and by small numbers of immigrants, the Hunter Valley was settled principally by immigrant, free settlers. Of 191 settlers listed in the 1828 Census as being resident in the Hunter Valley, 64.5% had come to the colony as free men, and of these more than half (33.4%) had arrived during or after 1821.

82. See Appendix 13, Table A.
83. See Appendix 14, Table B.
Chapter 5.

On the whole, the free, immigrant settlers were men of some substance and standing. Many, though admittedly not all, came to the colony with capital and the patronage of influential members of British or colonial society. They included retired naval and military officers, professional men, successful merchants, British yeomen and the sons of yeomen, relatives of the colony's civil and military officers, the sons of these officers, and young men who, with a few hundred pounds, and often much less, had come to the colony to make their fortune. Unlike the colony's first settlers many of them were already knowledgeable and experienced agriculturalists and stock breeders who brought with them the new implements and methods of the British agrarian revolution. Some even brought farm labourers and shepherds with them, while others brought, or later imported, blood-stock, new varieties of seed-grain, and grass-seed for pasture improvement. Many of them were in their twenties or early thirties. All in all they were the kind of people who because of their capital, experience, ability and age might be expected to be remarkably successful settlers. And they were the men who formed the bulk of the Hunter Valley's farmers and
Chapter 5.

The class structure was reflected in the size of Hunter properties. Since many of the free settlers were, by virtue of their capital, entitled to receive large grants (they were given 640 acres for each £500 Sterling they possessed in cash or goods) and could afford to supplement these by purchase, whereas comparatively few of the colonial-born and even fewer ex-convicts could qualify for large grants or afford to purchase land in any quantity, it was to be expected that there would be a higher proportion of large grants than small ones, and that the large ones would be in the hands of the immigrants. And such was the case. Of 370 holdings (grants, purchases, leases, and reserves for grant or purchase by individuals) listed in Henry Dangar's Index and Directory to ... the River Hunter, 153 or 41% were of areas in excess of 1,000 acres and 228 or almost 62% areas of more than 500 acres. Only 27 (7%) were of less than 99 acres, and 88 or 24% of the holdings contained fewer than 199 acres. (As many individuals possessed several of these holdings - and this is true of both large and small holders - properties
Chapter 5.

would have been somewhat larger than these figures indicate). The farms of the 191 resident settlers listed in the 1825 Census show a similar size distribution: 74% were of more than 1,000 acres and 62% of more than 500; only 28% contained fewer than 199 acres.¹⁸⁴

Sixty-three of the 191 were greater than 2,000 acres and all of these but three were owned by free, immigrant settlers.

The fact that large areas were in the hands of a small number of settlers naturally led to a demand for assigned convict servants to work the properties, and as the settlers were, in most cases, in a position to support them, the adult male population of the valley contained a larger-than-usual proportion of convicts: 69% of the valley’s men were convicts according to the 1828 Census.¹⁸⁵ This figure was only exceeded by the Bathurst district (which included a small penal settlement at Wellington Valley and in which many properties were merely stock runs tended by the servants of absentee

¹⁸⁴. See Appendix 14, Table B.
¹⁸⁵. See Appendix 13, Table B.
Chapter 5.

But while a consideration of property size and population structure goes far in explaining the Hunter Valley's rapid development and importance, it gives no real picture of the character of the settled areas and so the final portion of this chapter will be a discussion of the valley's farms as revealed by the 1828 census. For convenience they will be considered in three groups: small farms (1 to 99 acres), moderately sized ones (100 to 999 acres), and large ones (of more than 1,000 acres).

The small ones were, almost without exception, located on the alluvial soils of the river banks. They were most numerous on Wallis's, Paterson's and Patrick's Plains, but were also found in smaller clusters in the valleys of the Williams and Paterson Rivers and of Wollombi Rivulet. (See Maps 10 and 11, but note that except where a number of small farms formed a sizeable group it has not been possible to show them on the maps). Both the medium sized and large farms were found throughout the settled areas without any marked regional distribution except that there were rather more moderately sized properties in the lower part of the valley.
below Patrick's Plains than in any other part, and that the very largest properties were situated in the upper valley (above the Goulburn junction) and elsewhere on the fringes of the occupied lands.

The Census lists, and gives detailed information on, 191 of the Hunter Valley's resident farmers. Together they owned 58% of the land held by individual settlers in the valley, and 74% of the cultivated land. They grazed 65% of its cattle and 56% of its sheep. The

86. The original of the New South Wales Census taken in the Month of November 1828 is in the Public Record Office, London (H.O. 10/21), but the Mitchell Library holds a manuscript copy of it made in 1932 by E. Divelly (7 vols, A1943 to A1949). Entries extracted from it were used in the compilation of the data contained in this (and later chapters) and set out fully in the Appendices (Appendix 14 contains the tables relating to the Hunter Valley). A note on the compilation of the tables and on the validity of conclusions drawn from them is given at the end of Appendix 14.

87. See Appendix 14. As the whole of the data (except the details of individual farms for which references are provided) presented in this and the succeeding paragraphs is based on the tables of Appendix 14, no further footnote reference will be made to it.
remaining farms (making up the other 42% of the land held) were presumably owned by non-resident proprietors who appear to have been principally pastoralists and graziers: they cultivated only 26% of the cropland, but kept 35% of the cattle and 44% of the sheep in the valley. Thus, the farms of the 191 residents were, as might be expected, rather more intensively utilized than those of the absentees. Thirty-six of these 191 farms (or 18% of them) were of fewer than 100 acres, 64 (33%) contained between 100 and 999 acres, and almost half of them (91 or 47%) extended over more than 1,000 acres.

About half of the farms in the 1-to-99 acre group were worked by ex-convicts, and about a third by free settlers. Their outstanding feature was their high proportion of cultivated land: some of the smallest farms were completely cultivated and 95% of the land on the farms of fewer than 19 acres was under crop. The proportion of the farm cultivated lessened as its size increased so that only about a third of the land on the larger farms (50 to 99 acres) was under crop. Only seven of these farmers depended solely on their crops for a livelihood, all the remainder kept cattle and one had a flock of sheep as well. Most of the herds were
Chapter 5.

fairly small, however, only 6 containing more than 50 head, but even so it would appear that many of these farmers used unoccupied Crown Lands adjoining their farms for pasturage. Few of the farms could have accommodated all their owners' stock, and especially when so much land was under cultivation. The man who owned the flock of sheep certainly used land outside his holding: he possessed only 85 acres of which 40 were under crop, but he grazed 311 sheep, 70 head of cattle and 26 horses. An extreme case admittedly, but here are three examples of typical properties:

The first farm belonged to a 58 year old ex-convict and consisted of 9 acres on the banks of Wollombi Brook near Patrick's Plains. He was cultivating all 9 acres, and owned a horse and 14 head of cattle. He was unmarried.

The second was on Paterson's Plains and was worked by a 23 year old "currency lad". He had 25 acres, 14 of which were cultivated, and kept 3 cows. He too was unmarried.

The third consisted of 65 acres at Patrick's

88. 1828 Census, Vol R-S, p. 19, No 487
89. 1828 Census, R-S, 76, 66.
90. 1828 Census, R-S, 113, 1054.
Chapter 5.

Plains. It was owned by a 45 year old, unmarried ex-convict who had cleared 3 acres and was cultivating 2. He grazed 40 head of cattle.91

The farms of the second group (100 to 999 acres) were mostly in the hands of immigrant settlers, who held 33 of the 64, and of ex-convicts who owned 15 of them. Though these farms accounted for only 8% of the area of the 191 properties, they contained about a quarter of both their cultivated land and cattle. Eight farms raised no crops, but about two-thirds of the remainder had at least 20 acres under cultivation. The proportion of the area of the farms cultivated decreased still further in this group: from 29% on the farms of from 100 to 199 acres, to only 3% on those having between 500 and 999 acres. Almost all these farms kept cattle (only three had none) but most of the herds were fairly small: 30 consisted of between 20 and 99 head, 24 had more than 100, but only 5 contained more than 500 head. Only ten of these farmers kept sheep, and most of these were on the larger properties. All the flocks contained more than 100 animals but there were only 2 with more than 500. Several of the folk on the

smaller properties probably grazed stock outside their farms, but not many of the farmers in this group would have needed to do so. The situation on three representative farms was as follows:

On a farm of 100 acres at Patrick's Plains, there were 40 acres that had been cleared and 20 under crop. The owner, born in the colony and 26 years old, grazed 80 cattle and 2 horses. He was married and had two children.92

The second farm belonged to one of the original ex-convict settlers at Paterson's Plains whose farm was described earlier in this chapter. He was still living there, but now had 300 acres of which 50 were cleared and 40 under crop. He had one horse and a herd of 40 cattle. He was now 69 years old and his wife, another ex-convict, 60.93

The third example was a larger farm of 640 acres at Patrick's Plains belonging to an immigrant settler who had arrived in New South Wales in 1826. Though he had occupied his farm for two years at the most, he had cleared 80 acres and was cultivating 24. He ran 80 head of cattle and 293 sheep. His wife aged 31 - he was 35 - had come with him in 1826 but their daughter was born in the colony.94

The larger farms containing more than 1,000

92. 1828 Census, C-D, 158, 209.
94. 1828 Census, A-B, 143, 2473.
Chapter 5.

acres accounted for about half the number and 91% of the area of the 191 farms. Apart from 4 for which there is no data, all but 8 belonged to free, immigrant settlers, of whom about two-thirds had arrived in the colony since the beginning of 1821. Of the other 8 (none of which exceeded 5,000 acres) two belonged to ex-convicts, and six to men born in New South Wales - most of them the sons of prominent citizens. Though only a small proportion of these properties was cultivated (2½ or 3 acres in every hundred on most of them except the very large ones) they included 69% of the cropland on the 191 farms, but the actual areas under crop were not very large - only 23 farmers were cultivating more than 100 acres. Almost all kept cattle and in fairly large herds, but only slightly more than half of them pastured sheep. As the greater number of these properties (40 of the 91) were within the 2,000 to 3,000 acre range, two of these will be quoted as examples, and one property of 6,000 acres will represent the larger ones.

First, a farm of 2,000 acres at Wallis's Plains which belonged to an immigrant settler and contained 200 cleared acres and 80 under cultivation: it grazed 260 cattle, 800 sheep and 10 horses. Its owner, aged 35, had come
Chapter 5.

to the colony in 1817 and was married with five children. The second farm contained 2,560 acres and was situated in the upper part of the Paterson valley though its owner gave his residence as "Paterson's Plains". Aged 31, he had come to the colony in 1826, but had already cleared 50 acres and was cultivating 40. He ran 655 sheep, 130 cattle and 7 horses. He was unmarried. The 6,000 acre farm was located on the western side of the Hunter about four miles above the Goulburn junction, and belonged to a 38 year old immigrant settler who was formerly a captain in the navy and now was one of the few resident proprietors in this part of the valley. Both he and his 24 year old wife had come to the colony in 1825. He had cleared 150 acres, had 90 under crop, and ran 450 cattle, 1,500 sheep and 27 horses.

Unfortunately the Census does not record how many servants the settlers were employing in working their properties.

Except in the case of the very small farms, the number of stock and the area of cultivated land on the Hunter Valley farms is not impressive, yet when Crown Lands were made available for renting in 1829,

95. 1828 Census, A-B, 98, 1443.
96. 1828 Census, T-Z, 55, 1066.
97. 1828 Census, m-Q, 130, 849.
settlers took out leases for 186,650 acres – an area representing slightly less than one-third of the granted lands held by settlers in the valley. Many of them, though not needing additional areas, would have been pleased to have the use of wider expanses of grazing land. This would apply particularly to those with sheep; current practice was to yard sheep at night and each day to pasture them on different parts of the run so that they were always on "clean" ground (during the day it was the hut keeper's task to move the hurdles forming the yard to a new place so that the sheep also had "clean" grounds each night). The larger the area under the pastoralist's control, then the greater would be the possible number of "sheep walks" (routes from and to the yards), and this was, no doubt, "a good thing." As few of the properties were fenced, the additional areas would also have facilitated the breaking up of large herds of cattle into smaller ones which could be grazed widely apart and so kept separate, and would have helped keep neighbours' herds from mixing. On the

98. See Appendix 15, "Occupied Land in the Hunter Valley, 1829".
Chapter 5.

whole, however, it would appear that the Hunter Valley settlers (and those in other districts too, for that matter) had little real need for additional land. The lands they leased were certainly a great convenience to them, but hardly a necessity.

On the other hand, it should be noted that while a great many properties were capable of very much improvement, a great deal had been achieved in a comparatively short time—especially on some of the larger farms occupied about 1826. The social history of the district lies outside the scope of the present study, but some of the difficulties encountered by the early settlers are worthy of note. The greatest of these was the want of labour. Assigned servants, and especially those with any kind of rural experience, were few and eagerly sought, while free men and ex-convicts were able to demand and obtain high wages and could not be found in sufficient numbers. Letters in the Colonial Secretary's *In-letters* show clearly that many settlers had barely enough servants to manage their farms and urgently wanted more. Apart from the difficulty of obtaining labour, controlling it was a further problem.
Chapter 5.

A magistrate's comment on the valley's free workmen has already been quoted (See page 189). Assigned servants generally had to be paid overtime for work outside the regulation working hours and very often had to be given extra allowances and privileges if they were to do satisfactory work during those hours. Many of them were recalcitrant and rebellious, and especially so on some of the more remote farms where recourse to a magistrate was difficult. Many of the settlers suffered repeated robbery; at first from escaping convicts or hostile natives and later from groups of bushrangers who were on occasions in league with some of the assigned servants. Some suffered the depredations of their own, or their neighbours', servants. These difficulties coupled with the want of all but the most essential and simple pieces of farm machinery show that in bringing 8,415 acres under crop and tending 30,000 cattle and 67,000 sheep the 191 resident settlers merited high praise.

It will also be noted that comparatively few of the settlers were married (70 of the 191). Throughout the colony there was the great disproportion between numbers of men and women which is typical of such
pioneer societies. In the colony as a whole men outnumbered women by 4 to 1, but in the Hunter Valley the ratio was almost 10 to 1. No doubt the 70 settlers who were married considered themselves very fortunate.

All in all, the settlement history of the Hunter Valley was unique in several ways. Of all the areas outside Cumberland, it was the first to be settled but the last to be occupied. Yet by 1829 it had become the most populous and highly developed of all. In bringing this about the penal settlement at Newcastle played an important, though indirect, part. Its presence led to the very deliberate refusal to allow settlement in the Hunter Valley at the time when the established settlers on the Cumberland were most anxious to obtain new grazing grounds. The result was that by the time it was withdrawn the colonial demand for land had been satisfied by the opening of the south-western and western districts: the penal establishment was the reason for the valley's late occupation. Following the

99. See Return of Population ... 1828: N.S.W. Returns 1828, pp. 146-7. The number of adult males in the colony was 24,776 and the number of adult females, 6,051. In the Hunter Valley the numbers were 2,610 and 277. (Adult = over 12 years of age).
Chapter 5.
removal of the penal settlement, the superiority of the Hunter Valley over the other available districts led to its occupation by the immigrant settlers then arriving in the colony in ever increasing numbers. Their enterprise produced a rapid development of both agriculture and stock raising (on the same farms) which contrasted with the predominantly grazing settlement found in both the western and south-western districts.
Chapter 6.

THE WESTERN DISTRICTS, 1813-29

Unlike the Hunter River Valley which is a distinct physiographic unit, the western part of the Nineteen Counties - the "Western Upland" of Chapter 1 - includes a wide range of quite diverse yet poorly demarcated landform regions. These range from gently undulating plains to steep and rocky ridges, but for the most part the country presents a fairly uniform appearance of wide, shallow valleys and low, rounded ridges. Nowhere, except for the Mt Canobolas highland island, are any of these units of sufficient magnitude to warrant their recognition as significant physiographic entities.

Part of the diversity of the landforms is a reflection of the area's complex geological structure, and while a detailed consideration of the geology of the Uplands would serve no useful purpose in this study, some of its features are worthy of note. Much, though not all, of the area between the Roxburgh and Georgiana
Chapter 6.

Highlands is granitic and has light, rather gravelly soils on its low hills, and wide areas of alluvium in its broad valleys. (See Plate 11). Mt Canobolas and its fringing ridges consist of Tertiary volcanics, principally trachytes, while to both the north and west of Canobolas there are a number of small areas of Tertiary basalt. The bulk of the upland country, however, consists principally of Devonian and Silurian strata, with some small areas of Jurassic, Carboniferous and Ordovician. Structurally, the area appears to be a great anticlinorium with a pitch slightly west of north, and somewhat masked by a number of smaller folds and cross-warps which have produced a reversal of pitch and caused anticlines to form domes and synclines to form basins. The most common rocks are shales, shales inter-bedded with sandstones, cherts, tuffs and porphyry, with smaller areas of limestones and granites.

The section of the Western Uplands which was settled prior to 1829 is possibly best conceived as being

Chapter 6.

Y-shaped: the Y having been turned on its side so that its tail runs east and west, and its arms extend to the north-west and south-west. The Roxburgh and Georgiana Highlands lie to its north and south, and Mt Canobolas within the angle of its arms (See Map 4). The first explorers came into this area from the east. Having descended the western scarp of the Blue Mountain Plateau and crossed the valley of the Cox, they climbed the series of ridges which divide the coastal from the inland rivers, or more precisely, the Cox from the headwater tributaries of the Macquarie. On the western side of these ridges, they found the valley of the Fish River which forms the most easterly part of the tail of the Y. Flowing westward (more or less), the Fish is joined by the Campbell River and together they form the Macquarie whose valley carries the upland area westward to the granitic plains in the vicinity of present day Bathurst. Beyond Bathurst the Macquarie flows north-west into the Roxburgh Highlands but the uplands continue westward towards Mt Canobolas on the ridge dividing the south-westerly tributaries of the Macquarie from the north-easterly tributary creeks of the Lachlan. A little to the east of Canobolas the upland branches. The north-westerly arm passes between Canobolas and the Roxburgh
Chapter 6.

Highlands and is extended northwards by the valleys of Molong Creek and the Bell River, while the south-westerly one extends towards the Lachlan, at first in the valleys of the Belubula River and its tributaries, and later in those of the creeks flowing from the north-east into the Lachlan itself.

The circumstances which led to the successful attempt to cross the Blue Mountains in 1813 have already been described in Chapter 3. The route taken by Blaxland's party terminated on Mt Blaxland, one of the more outstanding peaks on the ridges dividing the Cox from the Fish. From Mt Blaxland the party saw "forest land all round them sufficient to feed the Stock of the colony, in their opinions for the next thirty Years." But the news of this successful crossing of the mountains and of the forest land beyond was not received with any exultation when the party returned to Sydney. Blaxland later claimed that Macquarie "seemed dissatisfied", and the Sydney Gazette reported the event in unenthusiastic terms:

Chapter 6.

"We feel much pleasure in stating that a party of Gentlemen, with their attendants, who upon the 18th of last month embarked on a trackless journey into the interior, have returned from their expedition without the slightest injury from either fatigue or accident. They report a prodigious extent of fine level country lying in the direction they pursued, which time may render of importance and utility...."3

However, Assistant Surveyor George Evans was sent to confirm the report, and having reached Mt Blaxland he travelled further west to discover the Fish, Campbell and Macquarie Rivers, and the grassy plains of Bathurst.4 Upon Evans' return Macquarie decided to have a road made across the mountains and planned to visit the new country.

The construction of the road was committed to the supervision of William Cox, a former paymaster in the New South Wales Corps and now a prominent settler and

3. See Blaxland - Banks, 16 November 1816: Sydney Morning Herald, 5 January 1926 quoting the original in the British Museum (MS 8958 [or 8953?]). Sydney Gazette 12 June 1813.

Chapter 6.

Magistrate in the Windsor district. Work began on the road in July 1814, and by January 1815, it had been completed: a track about 12 feet wide stretching from the Nepean at Emu Island 101½ miles to the "central part of the Bathurst Plains". It followed the route taken by both Blaxland and Evans, and now taken, as far as Mt Victoria, by the road and railway. A little to the north-west of Mt Victoria, it descended the scarp of the plateau at Mt York and then ran more or less due west across the valley of the Cox, across the ridges and the Fish River, over more ridges and into Sidmouth Valley - a wide valley occupied by a small stream flowing northward to meet the Fish near the present site of Gemalla railway station (See Map 3). Sidmouth Valley was the first extensive area of open woodland west of the Cox. Continuing west again, it crossed the Fish River a second time at O'Connell Plains and ran north-westwards to the Bathurst Plains. (See Map 12. Sidmouth Valley is included in the Government Reserve immediately beneath the name "Fish R" on the Map, and O'Connell Plains are in the reserve on the north side of the Fish where the road crosses it).
Chapter 6.

On the 15th April 1815, Macquarie, accompanied by his wife and a suite of the colony's most prominent citizens, set off to visit the newly discovered country. They travelled at a leisurely pace, arriving at the Depot on Bathurst Plains on the 4th May. On the following Sunday, the 7th May, before Divine Service was read, the flag was hoisted, three volleys fired, three cheers given, and the Governor made a speech congratulating Evans and Cox, and their parties, on their exertions and naming the place Bathurst. The assembly drank to its prosperity. After Service, Cox and the surveyors Oxley and Meehan assisted Macquarie to mark the sites of a town, a government domain, and for a government house.

Upon his return to Sydney, Macquarie published a long Government and General Order describing his tour and expressing "astonishment and regret that amongst so large a population no one appeared, within the first 25 years of the establishment of this settlement, possessed of sufficient energy of mind to induce him fully to explore a passage over these mountains." But he added,

5. See Macquarie's Journals, pp. 89-110, esp 101.
Chapter 6.

"... when it is considered that for the greater part of that time, even this circumscribed portion of the country afforded sufficient produce for the wants of the people ... the surprise at the want of effort to surmount such difficulties must abate very considerably."

He now recognised the part played by Blaxland, Lawson and Wentworth in opening the route:

"To G. Blaxland and W. Wentworth, Esqs., and Lieutenant Lawson of the Royal Veteran Company, the merit is due of having, with extraordinary patience and much fatigue, effected the first passage over the most rugged and difficult part of the Blue Mountains...."

and after describing the fine prospects which the district offered for agricultural and pastoral settlement, outlined his policy concerning it:

"The Governor deems it expedient to notify here to the public that he does not mean to make any grant of land to the westward of the Blue Mountains until he shall receive the commands of His Majesty's Ministers on that subject...."

"In the meantime, such gentlemen, or other respectable free persons, as may wish to visit this new country, will be permitted to do so on making written application to the Governor...."

A little later he wrote to Earl Bathurst giving

his impressions of the country and suggesting a plan for its settlement. He recommended that 50 "sober" men be placed on farms of from 50 to 100 acres and supplied with stores for eighteen months; that no more settlers be given farms for two years and then, if the first settlement had been successful, 100 more farmers be established under the same conditions. "Gentlemen" settlers, he suggested, should receive land only. Because of the remoteness of the district and the difficulty of his making frequent visits to it, he proposed to place it under the charge of a Commandant, and after three years to have control pass to civil magistrates. But he did not intend to make any settlement in the district until he should receive Earl Bathurst's instructions.

Meanwhile Evans had been sent to explore the country to the south-west of Bathurst. The country in that direction seemed "accessible" and it was hoped that Evans might again fall in with the Macquarie whose course could not be followed by boat below Bathurst. In his

journey Evans found, not the Macquarie, but the Lachlan and returned with such an attractive description of the country that Macquarie determined to have further explorations made in that direction. But Earl Bathurst, having seen Evans' journal of his 1813-14 journey considered that he did not "appear from the Style of his Journal to be qualified by his education for the task of giving the Information respecting this 'New Country', which it is so desirable to obtain" and suggested that in future explorations he be accompanied by someone of "more scientific observations." Subsequent explorations were therefore made under Oxley's command. In his first expedition in 1817, Oxley followed the course of the Lachlan until it became lost in a vast swamp, and in his second in 1818, he followed the Macquarie until it too spread into wide marshes. These expeditions convinced him that "... the interior of this vast country


Chapter 6.

is a marsh and uninhabitable."¹¹ It was not until the drought of 1828-9 dried the marshes that it was possible to trace the lower courses of the Lachlan and Macquarie Rivers. In two expeditions in the years 1828-9 and 1829-30, Charles Sturt, followed these rivers and mapped the outlines of the Murray-Darling river system.¹²

The drought which had begun in 1814, however, forced the occupation of the Bathurst Plains. While he was constructing the road William Cox had taken some stock across the mountains, and in the latter part of 1815 a number of graziers asked Macquarie's permission to move their stock to Bathurst. None of them seems to

¹¹. The best and fullest account of these expeditions is given in Oxley's Journals of Two Expeditions into the Interior of New South Wales.... (Murray, London, 1820). A number of documents relating to them are published in H.R.A.

Chapter 6.

have been refused. William Lawson, who appears to have been the first to receive permission to transfer his stock to Bathurst was informed that he was not to graze them in the Vale of Clwydd (Macquarie's name for the Cox Valley) which was being reserved for the Government stock, and that he was to keep them west of the Cox. While the drought in Cumberland was more than sufficient reason for the graziers to wish to remove their sheep and cattle to Bathurst, the desirability of doing so was emphasised by the fine condition of a small herd of fat oxen brought from Bathurst during October for the Commissariat Store. In order to keep the privately owned stock separate from the Government herds, Macquarie ordered the government stockkeepers to keep their herds on the south-western side of the Macquarie river, and gave the private

13. The requests are in the C.S.L.L. and some replies in the C.S.L.M.P. Most of the requests, however, bear a note of the answer given.


individuals permission to graze only on its north-eastern side.

In February 1816, the Sydney Gazette was able to report bright prospects for future settlers at Bathurst. Experimental crops of wheat and barley had given an abundant return of "grain remarkably bright and fine". Oats and peas had suffered from late planting but were "good of their kind". While maize, potatoes and cabbages planted by Captain Antill during Maquarie's visit were reported to be thriving luxuriantly. The Government stock were looking remarkably well and the herbage was "as fine as can be". To the settlers of drought stricken Cumberland this report would have been welcome news.

But although both privately owned and Government stock had been taken to Bathurst during 1815, no settlers were established there until 1818 despite the fact that Earl Bathurst's approval of Maquarie's proposals was received twelve months previously.

Chapter 6.

Originally Macquarie had planned to initiate the settlement with 50 farmers but in April 1818 only ten actually occupied farms.\(^{18}\) By this time, the Government establishment at Bathurst constituted quite a small settlement on its own. In 1815 Richard Lewis had been appointed Superintendent of the settlement under the direction of William Cox.\(^{19}\) Lewis had a small staff of stockmen and tradesmen working under his direction, and he and Cox had several men tending their personal cattle and cultivating land for them. There was also a small detachment of soldiers. With the arrival of the settlers and their families and servants, the population of Bathurst was

\(^{18}\) See a note in Macquarie's Diary for 1818 (M.L.A773, p. 157) listing the settlers names which were apparently copied from a letter Macquarie received from Cox on the 23rd April. A "List of the Names of Free Settlers who are to receive ... Govt Men" dated 12 April 1818 (B.T. 16 p. 2171) contains the following entry:

"For 12 New Settlers lately sent to Bathurst wh a promise of 1 Govt man each - which are to be reserved for them accordingly - of good Strong Healthy Men."

Apparently twelve settlers were intended to go but in the actual event only ten went. These two documents appear to be the only ones giving a precise indication of when the settlers actually occupied their farms.

\(^{19}\) G.G.O. 10 June 1815.
increased to 66 persons. The weather appears to have been favourable for the preparation of ground for crops and by July the settlers were ready to plant their seed. Cox reported that they would plant about 50 acres of grain and 5 or 6 of potatoes which would bring the area of cultivated land at Bathurst up to 131 acres consisting of 100 acres of wheat, 20 of rye, oats and barley, 6 of potatoes and 5 of English grasses. Some of this was being cultivated for Cox and Lewis, and some may have been cultivated for the Government. Cox reported that the settlers' stock was doing well - two with sheep had, as result of lambing, added 120 to their flocks.

In 1819 Macquarie's plans for the district were carried a stage further with the appointment of William Lawson to the Commandancy of Bathurst and Magistracy of the newly formed County of Westmoreland. Westmoreland was bounded by the Grose, Nepean and

22. See G.G.O.s of 31 July and 21 August 1819.
Chapter 6.

Warragamba Rivers in the north, east and south, and was to extend an unspecified distance westward beyond Bathurst.

During the drought of 1819 Cumberland Plain settlers again sought permission to move stock over the mountains. Macquarie granted permission in every case, but refused to agree to a proposal put forward by Gregory Blaxland for the formation of a company to raise sheep in the interior. By October 1820 sheep and cattle belonging to twenty persons, apart from the ten settlers, were grazing in the country between Sidmouth Valley and Winburndale Creek. All together there were, according to the Muster, 4,751 cattle in the district, and 19,453 sheep. The bulk of this stock belonged to Cumberland settlers: they owned 3,872 of the cattle and 18,223 of the sheep. The remainder belonged to the government and the settlers, the government having 849 head of cattle.

23. The applications to move stock are in the C.S.I.L. and the replies in C.S.L.M.P. Blaxland's proposal was set out in a letter to Macquarie dated October 1819 and Macquarie's reply, part of which is quoted in Chapter 3, in Campbell - Blaxland, 10 November 1819: C.S.I.L. 13(60-87), 29-30 and C.S.L.M.P. October 1819-April 1820, 26-7.
Chapter 6.

and the settlers 75 cattle and 1,230 sheep. The area cultivated had more than doubled since 1818, there now being 299 acres under crop. The settlers cultivated 163 acres, the Government 71, and other private individuals, 65 acres. Wheat was the most important crop (246 acres), oats ranked next (31 acres), and there were small areas of barley, peas, beans, potatoes, garden and orchard.24

Up until this time the ten small settlers appear to have developed their farms for both crops and stock. They were all cultivating wheat, having areas ranging from 9 to 18 acres planted with it. All but one of them had one or two acres of oats, and most of them had small areas in potatoes, peas, and beans. Three raised small areas of barley and two had gardens or orchards. The majority of them had two or three horses, a small herd of cattle, and a number of pigs, but only

two raised sheep - their flocks numbered 300 and 930 head. But not all their stock was kept on the farms: Commissioner Bigge was told that they had permission to "run their cattle where they please".25

In the course of his enquiries Commissioner Bigge closely questioned Oxley, Cox and Lawson about Bathurst and the prospects for settlement in the surrounding country.26 Oxley did not think that the country west of the mountains was at all suitable for development by small settlers, but he did consider it "well adapted" for large grazing farms. Apart from the alluvial soils, he said that the soils near Bathurst were mostly gravelly loams which, while not naturally fertile, could produce almost any crop by a proper course of cultivation. He believed, however, that the cost of transporting goods across the mountains would always be

25. See John Read's evidence before Bigge: B.T. 5, 2114-21. Read was storekeeper at Bathurst. The details in this paragraph are based on the "Return of Land and Stock" mentioned in Footnote 24.

Chapter 6.

too expensive for an individual to be able to sell his produce on the Sydney market profitably, and that the small settlers would have no market for their grain were it not for the fact that the government bought it from them to issue as rations to the soldiers and stockmen at Bathurst, and also to the settlers themselves. He thought that the land to the south-west of Bathurst would be suitable for both grazing and cultivation, but was not impressed by the land on the Lachlan - "there cannot be a more miserable country." Cox, who had about 5,000 sheep at Bathurst, thought that the country was peculiarly suitable for sheep: "it is very open & ... all the Lower Lands yield an abundance & a variety of Herbs. It is remarkably well watered." Bigge was also told that the wheat at Bathurst was usually affected by smut but produced more flour than that grown on the coast, and that the Government stock fattened better at Bathurst than elsewhere and seemed to be healthier.27

27. See the evidence of James Blackman, one of the ten settlers, Thomas Arkell, Overseer of Government Stock at Bathurst, and A. J. Rodriguez, one of Cox's men: B.T.: 10, 3987-8, 4028 and 4045.
Chapter 6.

Though Governor Macquarie made several grants of land in the Bathurst district (the first went to William Lawson), the real settlement of the western country came during Governor Brisbane's administration with the grazing of extensive areas under Ticket-of-Occupation and the granting of land along the Fish and Macquarie Rivers. The instructions for the survey of the district were sent to Oxley in December 1822. The country was to be marked out in one-mile squares, distances being measured from the flagstaff at Bathurst. The fifty acre farms of the settlers were to have their boundaries realigned to fit into the grid, only those fences of "durability and creditable structure" being suffered to remain. Two square miles between the Macquarie River and Winburndale Creek were to be reserved as a source of firewood for the small settlers, and all the land to the west of the Campbell and Macquarie Rivers was to be reserved for the use of the government. The actual survey appears to have commenced in January 28.

Chapter 6.

1823, and by 1825 some 91,636 acres had been alienated.29 The bulk of this lay along the Fish River, on the eastern side of the Campbell immediately above the junction with the Fish, and between the Macquarie and Clear Creek (a tributary of Winburndale Creek). (See Map 12). The major part of the granted land lay close to Bathurst on its eastern side, relatively few grants being located in the Fish River Valley or to the north-west of Bathurst. During 1826, it was decided that it was no longer necessary to continue the reservation of the land to the west of the Campbell and Macquarie Rivers except for 10,000 acres in the immediate vicinity of Bathurst,30 and the most significant feature of the pattern of settlement between 1826 and 1829 was the occupation of the country between the Macquarie and the Lachlan. (See Map 13). A number of village reserves were made along the road to Wellington Valley where a small penal settlement had been

29. See Appendix 10, Table A.
30. See "Minute for the Executive Council ... 22nd August, 1826"; Bathurst - Darling, 2 April 1827; and Darling - Huskisson, 2 August 1828: H.R.A. xii, 538-9; xiii, 228; and xiv, 284.
established in 1823, but few settlers took up land in this part of the district.

More spectacular than the increase in the size of the granted areas was the widespread distribution of the grazing runs taken up under Tickets-of-Occupation. Though many settlers had received grazing permits prior to February 1822 when the first Ticket was issued, none of these had specified any area in which the stock could be grazed, but after that time, the place in which grazing was permitted was defined. The first ticket was issued to William Cox for a run on the Cudgegong River which had been discovered by William Lawson in 1821. It read:

"I am directed by the Governor Sir Thomas Brisbane to convey to you his sanction for your occupation of all the land extending two geographical miles in every direction from the spot where the 32° 30' parallel of south latitude cuts the Cudgegong River for the use of your flocks and herds as a grazing run: until such time as the Government may choose (six months notice being

31. See Lawson – Macquarie, 29 August 1821: C.S.I.L. Bathurst (9-21), unpaged; and "Journal of a Journey through the Country North of Bathurst" (M.L. G120).
Chapter 6.

previously given) to revoke this indulgence and resume the possession to itself."32

Later tickets simply defined the area of the run as "extending two geographical miles in every direction from your stock yard at" and named the place. The route to the Cudgegong lay across the Roxburgh Highlands, but despite the rugged country which had to be traversed, the Cudgegong was a most attractive place to the grazier: its valley was wide, floored with extensive alluvial flats, and covered with good pasture grasses and herbs. Shortly after Cox took up his run there Lawson also took out a Ticket-of-Occupation for land at Mudgee in the Cudgegong valley. Later Lawson occupied a more remote run on the Talbragar River (See Map 7). Indeed the most outstanding feature of the distribution of Ticket-of-Occupation runs west of the mountains was the way in which they were established in widely scattered situations in quite rugged country. Most remarkable was the line of groups of stations on the Permian "shelf" skirting the scarp of the sandstone plateau. These clusters, consisting of three or four runs at most, were

32. Goulburn - Cox, 5 February 1822: C.S.I.M.P. October 1821-March 1822, p. 239.
Chapter 6.

established in the Vale of Clwydd, Walerawang, Cullen Bullen, Capertee, Bogee, and Dabee. In each of these places there was a wide and relatively flat area of open woodland between the plateau scarp on the east and the heavily timbered, rugged country of the Roxburgh Highlands on the west. Near Bathurst itself runs were occupied on the Macquarie River, Winburndale Creek and Campbell River, at King's Plains at the source of the Belubula River, and in the vicinity of Wellington Valley. When the Ticket-of-Occupation was abolished many graziers retained possession of their runs by obtaining them by grant or purchase - both Cox and Lawson, for instance, retained their runs on the Cudgegong and Talbragar Rivers.

But although the Bathurst district was the first of the areas outside Cumberland to be made available (with restrictions) to the colony's settlers, its development was slower than that in any of the other newly settled areas except, perhaps, Illawarra. Although Macquarie claimed to have given permission to move stock to Bathurst to all who requested it, in 1821 the district contained only 0.9% of the colony's population, 1.4% of its cultivated land and 8.7% of its cattle. It did,
Chapter 6.

however, pasture a more significant proportion of the sheep in New South Wales - 23.2% - and was the principal sheep grazing district: a position which it continued to hold though with some diminution in the distinction. In the years 1821-8 while the newly settled areas became increasingly important, the western district's development was not as rapid as that of the Hunter Valley or of Argyle. Its share of the colony's population increased to 3.5% prior to 1825 and was only 5.6% in 1828. Though it contained 12% of the colony's alienated land in 1825 (3% more than in the Hunter Valley and only slightly less than half that in all the newly settled areas), and though there was a three-fold increase in the area alienated between 1825 and 1828, the percentage had dropped to 10.6%: a much smaller proportion than that in the Hunter Valley (about 18% without the Australian Agricultural Company's grant) or Argyle (13%). Its percentage of the colony's cultivated land increased to 4% by 1825 and to 5.5% by 1828, but as it was primarily a stock grazing area and crops were grown only for local consumption its stock figures are more significant than those for cultivation. In 1828 it was still the major sheep raising area but its importance had declined.
somewhat: between 1825 and 1828 its stake in the sheep population had fallen from 38% to 33%, while Argyle's had increased from 13% to 24% and the Hunter's from 3% to 23%. In both 1825 and 1828 the Bathurst district ranked second to Argyle in number of cattle but its importance had not increased very greatly between those years. In 1825 there was little difference between the two districts' percentage share in the total number of cattle (Argyle 16.4%, Bathurst 16.3%) but during the following three years Argyle's percentage rose to 29.8% while Bathurst's increased to only 19.8%.33

There were three separate influences at work retarding the development of the western district. One was the difficulty of communication with Cumberland and Sydney, another the fact that it was developed largely by non-resident proprietors, and the third, which will be discussed at the end of the chapter, the hostility of the natives. In the last chapter reference was made to the high cost of transportation to Bathurst and to

33. The statistics quoted in this paragraph are from Appendices 9 and 10.
Chapter 6.

the length of time required for the journey: a freight rate of £1 per 100 pounds weight was charged by the coach running from Parramatta to Bathurst which took four or five days for the trip, and with loaded bullock carts the journey could take as long as eighteen days. Apart from its costliness and slowness, the journey to Bathurst was also a difficult one. The descent of Mt York was precipitous and dangerous, but much of the road was extremely rough and occasioned damage to vehicles and great fatigue in bullocks and horses. Some improvement came after the re-routing of the road between Mt York and Bathurst so that it passed over the gently undulating country to the north of the Fish River instead of over the valleys and ridges on its south (See Map 12), but despite this the cost and difficulty of communication over the Blue Mountains remained a major handicap.

Apart from wool and live cattle, the only products of the district to find their way to the Sydney market were small numbers of cheeses and hams. All its agricultural

34. See advertisement in S.G. 11 March 1824 and Mrs Elizabeth Hawkins' "Journey from Sydney to Bathurst, 1822": R.A.H.S.J. ix (1923), 177-97.
produce was used locally.

From the beginning absentee proprietorship was a major characteristic of the district's settlement. The first flocks and herds taken over the mountains were tended by a few of their owners' assigned servants, and later this continued to be the situation on the Ticket-of-Occupation runs and on many of the lands held by grant. Mrs Hawkins, for instance, commented in her journal that the owners of many grants "have only huts there for their stock keepers to reside in, and pay only occasional visits." A consequence of this was the small proportion of the land owning classes (immigrants, the colonial born and ex-convicts) in the district's population and an unusually large proportion of convicts (assigned servants). According to the 1828 Census the Bathurst district contained the smallest percentage of immigrants in its adult male population of all the districts in the colony - 6.4% - and the highest percentage

35. R.A.H.S.J. ix (1923), 177-97.
Chapter 6.

of convicts - 73.0\%^{36}

The 1828 Census contains the details of 100 of the district's farms.\(^37\) In many respects the situation in the Bathurst district was similar to that in the Hunter Valley and therefore their features will not be described in as much detail as the Hunter ones. There were, however, some quite important differences between the situations in the two districts. The pattern of land ownership was very much like that in the Hunter: the larger properties were principally in the hands of free immigrants and the small ones in the possession of ex-convicts. The only important difference was that the immigrants held a slightly smaller percentage of the number of properties and colonial born men and ex-convicts

36. See Appendix 13, Table B. It should be noted that the Census includes within the Bathurst district the small penal settlement at Wellington Valley where there would have been between 80 and 100 convicts, not enough to make any substantial reduction in the percentage composition of the population. (In 1825 there were 84 convicts at Wellington Valley [see Appendix 9, note 1] and in 1829, 92 H.R.A. I, xv, 386. The actual number there in 1828 is not given in the Census).

37. See Appendix 16.
Chapter 6.

a larger one than in the Hunter Valley. The larger properties (more than 1,000 acres) made up a slightly greater percentage of the area of the farms than did farms of a similar size in the Hunter Valley. In the Bathurst district almost 95% of the area held appears to have been in very large properties. The percentage in the Hunter was 91.5%. There were, however, a very much smaller proportion of moderately sized farms in the Bathurst district than in the Hunter. In the west farms of between 100 and 999 acres made up only 23% of the total number and 4.6% of the area of the 100 farms whereas they accounted for 33% of the number and 8% of the area in the Hunter Valley. This is a further reflection of the essentially grazing character of the settlement in the western district: farms were either very large stock ones, or the very small crop-and-stock ones of the ex-convict small farmers. Unlike the Hunter Valley the district did not lend itself to the development of larger crop-and-stock farms because of the difficulty of marketing agricultural produce in Sydney and the small local demand for it. A second feature, again in keeping with the pastoral emphasis, is that a considerably smaller percentage of the area held by settlers
Chapter 6.

was cultivated. Whereas the small farmers of the Hunter cultivated as much as 95% of the area of their holdings, not more than 81% was cultivated at Bathurst, and for farms of all sizes (except those in the 100-199 acre group) the proportion of the area held which was under crop was considerably lower in the western districts than in the Hunter Valley. The actual areas cultivated were smaller too: in the Hunter 60% of the cultivated areas ranged in size from 20 to 199 acres. In the Bathurst district only 41% were within this range and a further 41% were of fewer than 20 acres.

The emphasis on sheep raising in the west is further shown by the distribution of sheep among the properties. In the Hunter 65% of the holdings kept no sheep but in the Bathurst area only 35% of the farms (and principally the smaller ones) were without them. Unlike the small farmers in the Hunter Valley, those at Bathurst owned a significant proportion of the district's sheep but about the same proportion of its cattle as those in the Hunter. The size of the flocks and herds was larger in the west than in the Hunter: 35% of the flocks contained more than 1,000 head and few consisted of fewer than 200, while 39% of the herds of cattle
Chapter 6.

numbered more than 200 head. In the Hunter Valley only 11% of the properties had more than 1,000 sheep and only 26% more than 200 cattle.

An interesting fact revealed by the Census is that few of the original small farmers appear to have remained small farmers. Of the ten farmers given 50 acres in 1818, seven are listed in the 1828 Census. All had increased their holdings and two had become quite substantial landholders. The details of their holdings of land and stock are:-

<table>
<thead>
<tr>
<th>Acres held:</th>
<th>80</th>
<th>85</th>
<th>95</th>
<th>110</th>
<th>150</th>
<th>1148</th>
<th>2750</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated (acres)</td>
<td>30</td>
<td>25</td>
<td>30</td>
<td>32</td>
<td>80</td>
<td>56</td>
<td>110</td>
</tr>
<tr>
<td>Horses:</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Cattle:</td>
<td>41</td>
<td>80</td>
<td>47</td>
<td>103</td>
<td>230</td>
<td>170</td>
<td>103</td>
</tr>
<tr>
<td>Sheep:</td>
<td>1000</td>
<td>220</td>
<td>-</td>
<td>500</td>
<td>1000</td>
<td>850</td>
<td>500</td>
</tr>
</tbody>
</table>

Reference to 1828 Census:

<table>
<thead>
<tr>
<th>Vol</th>
<th>C-D</th>
<th>E-H</th>
<th>M-Q</th>
<th>M-Q</th>
<th>I-L</th>
<th>A-B</th>
<th>I-L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page</td>
<td>44</td>
<td>119</td>
<td>250</td>
<td>55</td>
<td>89</td>
<td>93</td>
<td>112</td>
</tr>
<tr>
<td>No</td>
<td>1017</td>
<td>605</td>
<td>2487</td>
<td>178</td>
<td>981</td>
<td>1306</td>
<td>494</td>
</tr>
</tbody>
</table>

These seven properties are fairly representative of all but the district's very small and very large farms.

Corresponding particulars of three small ones and three
Chapter 6.

very large ones are:—

<table>
<thead>
<tr>
<th>Acres held:</th>
<th>8</th>
<th>20</th>
<th>40</th>
<th>5950</th>
<th>6500</th>
<th>14770</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated (acres)</td>
<td>8</td>
<td>2</td>
<td>-</td>
<td>110</td>
<td>85</td>
<td>135</td>
</tr>
<tr>
<td>Horses:</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>17</td>
<td>65</td>
</tr>
<tr>
<td>Cattle:</td>
<td>-</td>
<td>14</td>
<td>3</td>
<td>-</td>
<td>605</td>
<td>1450</td>
</tr>
<tr>
<td>Sheep:</td>
<td>50</td>
<td>-</td>
<td>200</td>
<td>4690</td>
<td>2020</td>
<td>7500</td>
</tr>
</tbody>
</table>

Reference to 1828 Census:

<table>
<thead>
<tr>
<th>Vol</th>
<th>A-B</th>
<th>A-B</th>
<th>M-Q</th>
<th>C-D</th>
<th>R-S</th>
<th>I-L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page</td>
<td>29</td>
<td>59</td>
<td>152</td>
<td>116</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>No</td>
<td>680</td>
<td>546</td>
<td>1359</td>
<td>2670</td>
<td>137</td>
<td>215</td>
</tr>
</tbody>
</table>

An interesting sidelight on the pastoral methods of the time is the fact that horses appear to be connected principally with cattle raising: the two properties keeping sheep but no cattle have no horses. In these times the sheep were tended by pedestrian shepherds who, on many properties, were not allowed to keep dogs because they might worry the sheep and hurry them too much.

A further interesting feature of settlement in the Bathurst district is that many of the assigned servants or free stockmen and shepherds were apparently allowed to keep herds and flocks of their own. A number
Chapter 6.

of men describing themselves as overseers, superinten-
dants or servants, but owning no land are listed in the
Census as owning sheep and cattle. There are no similar
entries for people in the Hunter Valley.

Although Governor Macquarie marked out the
site of the town of Bathurst in 1815, it would appear
that the town was little more than a name and a few
houses. Indeed as late as 1823, the Colonial Secretary
informed one, Robert Fopp, who had requested a license
to open an inn at Bathurst that his request could not
be granted "as in the imaginary site of the fancied town
of Bathurst it is neither intended to allow any Inn to
be built nor Spirits nor Wine to be sold."38 And in
1827 it would appear that Bathurst was still a "fancied
town". The anonymous X.Y.Z. described it as a "mere
magni nominis umbra ... the wretchedest place in New
South Wales" and commented that there were only "nine or

38. Goulburn - Fopp, 9 April 1823: C.S.L.M.P. March-
August 1823, p. 105.
ten low thatched huts or cottages." While he gave no further description of the town, he did comment that the small settlers' "whitewashed houses and glazed windows, good gardens and golden-coloured stacks of wheat indicated a high degree of industry and ease that was pleasing to contemplate." Peter Cunningham in his Two Years in New South Wales also omits any real description of a town at Bathurst. He mentions the Bathurst Classical and Mercantile School, the Bathurst Literary Society, the green-coated Bathurst Hunt, its "intelligent and harmonious society", and the two mills which had been built there, but does not describe the town at all though he refers to the "government station and village of Bathurst." In 1824 a French visitor described it:—

"Bathurst properly speaking, consists of only about a dozen houses, grouped as a nucleus, among which special notice must be taken of


40. Cunningham, Two Years in N.S.W. i, 152-61.
Chapter 6.

... the commandant's, the convicts' quarters, etc."41

It would appear then that the development of a township at Bathurst had barely begun. But if the town was "the wretchedest place in New South Wales" it was a healthy one, or so Cunningham would have us believe. His comment on the salubrity of the climate at Bathurst cannot be ignored:

"No better proof can indeed be given of the healthfulness of Bathurst, than that the only death owing to natural causes from the period of its first settlement took place in 1826, after a space of twelve years."42

But if the first death from natural causes occurred in 1826, many had previously resulted from "unnatural" ones. Not all the members of the district's population were "harmonious". Soon after the area was first occupied the store at Bathurst was plundered by natives and Macquarie found it expedient to place a detachment of soldiers west of the mountains to protect the government stockmen and cattle, to guard the stores.


42. Cunningham, Two Years in N.S.W. i, 161. His italics!
and to keep open communications with Sydney. Little further trouble occurred until the widespread grazing occupation of the district began in 1822. Shortly after Cox established his station at Cudgegong in February it was attacked by a party of hostile aborigines and from that time until August 1824 there was a series of acts of violence. Beasts were frequently killed, a number of stockmen were murdered and on one occasion the men on the more remote runs abandoned their stock and fled to Bathurst for safety. The Sydney Gazette reported that the natives had adopted the attitude that since the white men had frightened away the possums and kangaroos they must needs eat beef, and Judge-Advocate Wylde, owner of stock grazing at Bathurst, pointed out that the aborigines generally dressed and ate the cattle they

43. See Macquarie's "Instructions to Sergeant Jeremiah Murphy ... 22nd April, 1816": C.S.I.L. Bathurst (9-21) unpaged.

44. See Cox - Brisbane, 7 February 1822: C.S.I.L. Bathurst (9-21) unpaged. The documents describing the various acts of hostility on both sides are too numerous to be cited individually. They are all in the Bathurst volumes of the C.S.I.L. Only the most important will be referred to.
Chapter 6.

William Lawson, Commandant at Bathurst believed that the whites were the original aggressors and it is likely that this was so. The first shots may well have been fired because stock had been killed or to prevent them being killed. But whoever the original aggressor the fact remains that a number of stockmen (probably about 20 altogether), a considerably greater number of aborigines, and many sheep and cattle were killed in the district. The trouble reached its climax in May 1824 when seven stockmen were murdered. A number of stockowners immediately requested the governor to take "prompt and effective" action to stop further losses of life and animals and in July the governor called a meeting at Parramatta which recommended the use of military force to disperse the natives and that then conciliatory measures be taken. In August more stockmen


47. "Minutes of a Meeting of Stockholders ... 3 June 1824": C.S.I.L. Bathurst (22-29) unpaged.

Chapter 6.

were murdered and about 250 sheep killed, actions which resulted in the proclamation of martial law in the area west of Mt York and the dispatch of a large body of soldiers to the district. By December the patrolling of the country by small detachments and the efforts of the magistrates to bring about an amicable settlement brought the natives "to a sense of their Duty" without loss of life on either side and the proclamation of martial law was repealed. 49

The blacks were not, however, the only refractory group to harass the stock runs in the Bathurst district and after their pacification settlers continued to be troubled by small bands of bushrangers. Most of these were either convicts who had escaped from Newcastle or Port Macquarie or who had run from the service of the masters to whom they had been assigned as servants. They lived in the bush regularly plundering huts and stores for provisions and occasionally indulged in roadside (one can hardly say "highway") robbery. The problem

49. See Proclamations 14 August and 11 December 1824, Also Brisbane - Bathurst, 3 November and 31 December 1824: H.R.A. I, xi, 409-11 and 430-2.
Chapter 6.

of rounding them up was complicated by the fact that the stockmen would not act against them for fear of retaliation. They would not attempt to shoot or capture bushrangers for fear of the revenge of other members of their band. In some cases it would almost appear that the stockmen had what amounted to a "pact of non-aggression" with them while some were certainly in league with them. Following the suppression of the aborigines the bushrangers had to be dealt with. In February 1825, as a result of an increase in the number of their depredations in both the Bathurst and Hunter River districts, the governor offered escaped convicts (other than those who had run from Newcastle or Port Macquarie) pardon for all crimes except murder and highway- or house-robbery if they should give themselves up, but promised that those who did not surrender and were subsequently captured would be transported for life to

50. Here again, the number of individual documents is too large to permit references to each of them. This description is based on the documents in the Bathurst volumes of the C.S.I.L.
Chapter 6.

Port Macquarie or Macquarie Harbour. Few availed themselves of this offer and later in the year detachments of mounted police were placed in both districts to hunt them down and rewards were offered for their apprehension. These measures, but principally the use of mounted police, were so successful that by November the offer of rewards was withdrawn "Tranquility being happily restored in the districts of Bathurst and Hunter's River...." Part of this success can be attributed to the fact that many of the bushrangers merely shifted the scene of their activities to Argyle where they became increasingly troublesome. In the Bathurst district bushranging continued sporadically and on a smaller scale than before, and the presence of small detachments of troops at Bathurst, Molong Plains (now Molong), Wellington Valley and on the Fish and Cox's Rivers gave

51. Proclamation 9 February 1825. Macquarie Harbour was a penal settlement on the west coast of Van Diemen's Land (Tasmania).

52. See Public Notice 7 September 1825. Also Brisbane - Bathurst, 8 November 1825: H.R.A. I, xi, 897-9.

Chapter 6.

the settlers greater security from them.\textsuperscript{54}

It could almost be said that the story of the settlement of the Bathurst district constitutes a study in retarded development, the retarding forces being partly physical, partly human. The greatest of the physical disabilities was the Blue Mountain Plateau. Though it was no longer a barrier to east-west travel, it was very much a barrier to development and easy communication. The second physical factor lay in the fact that apart from the difficulty of marketing produce, the district was not well suited to the agriculture of the time: it did not possess any great areas of fertile alluvial soil, the favoured soil for crops, and the bulk of its granitic soils were rather too dry and gravelly to be really attractive. The human factors acted in succession. First there was Macquarie's desire to reserve the whole district for a carefully planned and controlled development which led him to refuse to make grants of land in the district during the greater part of his administration. Second there was the

\textsuperscript{54} See Darling - Bathurst, 4 May 1826 and Proclamation 21 March 1826: H.R.A. I, xii, 264-6.
government's reservation of the land south and west of the Macquarie and Campbell Rivers: the area generally considered to be the most useful and the one which was most closely taken up after the reservation was lifted in 1826. The exclusion of settlers from this area was no doubt a major factor contributing to the occupation of such remote and isolated places as Mudgee, Talbragar, Dabee, Bogee and Capertee to the north of the Macquarie. A third consideration was the fact that the district was occupied principally as a grazing annex to Cumberland properties and so by non-resident proprietors who had neither the need, nor the inclination, to undertake developmental work on their runs. Fourthly, the hostility of the aborigines not only alarmed many of the owners of stock grazing in the district, but probably influenced others to graze their sheep and cattle in Argyle rather than expose them, and their attendants, to a very real danger in the Bathurst district. Such considerations supported by contemporary statistics certainly show that Peter Cunningham, and all who have since echoed his remarks, wrote with rather more enthusiasm than sense of reality when he stated that following the discovery of a route over the Blue Mountains "the
superabundant population and superabundant flocks and herds of the Cumberland Plain poured like a torrent over the dividing barrier-ridge, inundating the fine plains and downs beyond its western base. He certainly ignored the facts that Governor Macquarie restricted access to the western country for many years after the discovery of the route and that when a "superabundant" stock had to be provided with new grazing lands they were directed, not westward to Bathurst, but south-westward into the "New Country" of Argyle.

55. Cunningham, Two Years in N.S.W., i, 157.
THE SOUTH-WESTERN DISTRICTS, 1816-29

In 1788 a small herd of cattle comprising the whole of the colony's stock strayed from Sydney and though an intensive search was made for them they were not recovered. They had disappeared leaving no tracks.\(^1\) Seven years later they and their progeny were found grazing on the fine natural pastures of the Nepean's alluvial flats at the southern end of the Cumberland Plain.\(^2\) This area subsequently became known as the Cowpastures. In 1803 following a number of illicit attempts to capture and kill some of the "wild cattle" Governor King forbade anyone, except those who had first obtained his personal permission, to cross the Nepean or to molest the cattle in any way: they were to remain

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Chapter 7.

undisturbed until such time as the government saw fit to make use of them. From that time the Nepean was the colony's south-western frontier. Beyond it lay some of the most coveted land in the colony, the rich alluvial soils and hill-and-dale country of the Cowpastures - and further away, so the convicts said, was a delectable land of ease and plenty. But this was never found: a party which made two journeys to the south-west of the Cowpastures in 1798 found nothing but the most inhospitable country and later Barrallier and Caley who sought to cross the Blue Mountains in that direction found that


4. In 1804 John Macarthur obtained from Lord Camden an order for a grant of land at Mt Taurus. Camden did not know at the time that Mt Taurus lay within the Cowpastures, but when Governor King pointed this out, felt obliged to honour his promise. Macarthur was the only person to obtain permission to use land beyond the Nepean until 1816 when Oxley and Moore were allowed to take stock to Bargo. Land in the Cowpastures did not become available to settlers until 1823. Re the reservation of the Cowpastures, Macarthur's grant, and the disposal of land there in 1823, see H.R.A. I, iv, 308, 462 & 604; v, i, 161ff, 510ff & 576-7; and xi, 92ff, 182, 184, 254, 257, 349, 698ff, & 809ff.

5. See Collins' Account, ii, 75.
Chapter 7.

the Cowpastures were backed by a sterile sandstone plateau broken by deep, cliff-girt canyons.

It has already been noted that the Cumberland Plain was formed by the warping of the Hawkesbury Sandstone plateau. In the west where the warping was most severe the plateau surface rises high above the plain, but in the south the warping was not as severe, and the country rises less spectacularly from plain to plateau. The plateau is, in fact, but slightly higher than the ridges on the plain. The change from the Wianamatta Shale of the plain to the sandstone of the plateau is more obvious: the open woodland gives way to a eucalypt forest with a dense scrub undergrowth. This section of the plateau to the south-west of the Cumberland Plain with its deep canyons cut by the Nepean and its tributaries the Bargo, Avon, Cordeaux and Cataract Rivers, and further west those of the Nattai and Wollondilly Rivers, was known as the Bargo Brush. In the gullies the trees grew tall and straight but on the thinner soils of the plateau surface they

6. See Appendix 5.
Chapter 7.

were, and still are for that matter, twisted and stunted and in places the vegetation cover is a scrub rather than a forest. Where there are small areas of Wianamatta Shale on the sandstone there was a more attractive woodland, but on the whole the Bargo Brush was not an attractive area. Thomas Mitchell, who later became Surveyor General, described it:

"Bargo Brush - a tract of tolerable land covered with stunted trees and thick brushwood, scarcely penetrable by horses.... Travellers generally hasten through this tract which extends for about 14 miles - there being no water or grass - and there being no room for any cooling breeze through the brush it is generally very hot.... Between Bargo Brush and the Wollondilly to the west there is an extensive tract of country which from the impervious nature of the brush is very imperfectly known." 7

Beyond the Bargo Brush, in a second slight depression in the plateau surface a large area of Wianamatta Shale has been preserved and produced a district with heavy clay soils and an open woodland vegetation similar to the Cumberland Plain. Macquarie named this area "Sutton Forest". 8 Within this area and

surrounding it there are a number of quite extensive extrusions of Tertiary basalt which rise above the surrounding country as flat-topped, steep-sided ridges and hills, and which weather to produce a rich dark soil. The Sutton Forest area is drained by the Wingecarribee River, a tributary of the Wollondilly, whose headwaters lie in an extensive area of rather ill-drained alluvium. (See Maps 14 and 16). The slightly wetter and cooler climate of this area produced finer trees and a more luxuriant growth of grass than on the Cumberland Plain and it was esteemed to be one of the finest districts in the colony. William Broughton, Acting Assistant Commissary General and a settler and magistrate in the Appin district, described it to Macquarie in these terms:

"...the greater portion will answer either for Pasture or agriculture some ... may be considered equal to the Cow Pastures for Grazing and superior for Agricultural Purposes.... The country ... is certainly the most beautiful I ever saw.... It is interspersed with Hills which rise to a very considerable height and not withstanding the sides and tops are thickly covered with stones of the Basaltic kind, the pasture is uncommonly luxuriant - As far as the Eye could reach these Hills are to be seen rising one above the other, with open valleys exhibiting beautiful meadow Ground (for they can by no means be called Swamps or Marshes) which are well stored with Ponds of Water.... The country as far as we went after passing the
Chapter 7.

Wingee Wingee Garape is thinly covered with trees, and abounding with Kangaroos and Rich Pasturage...."9

On all sides the Sutton Forest Basin is fringed by the Hawkesbury Sandstone plateau which ends in steep scarps within a few miles of it on the west, south and east. To the west is the canyon of the Wollondilly, to the south that of the Shoalhaven, and in the east the Illawarra scarp. In the south-west, there is a gap between the gorges of the Shoalhaven and Wollondilly which gives access from the plateau to the upland country of the Southern Tableland which lies to the west of the Wollondilly and Shoalhaven (See Map 4). This gap is known as the Marulan Ramp. The sandstone country west and south of Sutton Forest was known as Wombat Brush: it was in practically every respect identical with the Bargo Brush.

Beyond the Marulan Ramp, the country opens out into a broad upland area similar in aspect to the Western Uplands. It is an area of wide horizons, shallow

Chapter 7.

valleys, gentle slopes, and extensive, almost flat plains. Like the Western Uplands, the Southern Tableland does not lend itself to satisfactory subdivision into physiographic units though there is some variation in the character of the country. For the most part it is between 2,000 and 3,000 feet high (it is, in parts, higher than the Highland country on its east and south) and but slightly dissected. At its centre there is an area of intermittent lakes, lake-bed plains and low ridges (the area marked U3A on Map 4). Lake George is the largest and most famous of the intermittent lakes. From time to time it dries completely to leave a flat, grassy plain, or within a relatively short time fills to become a sheet of water covering more than 38,500 acres - the largest lake in New South Wales. The mechanism of its filling and draining is not, as yet, clearly understood. To the east of Lake George there is a second smaller intermittent lake, Lake Bathurst, and to the north a number of small lagoons. Within this area of lakes and plains, are several extensive areas of almost flat natural grassland some of which represent the beds of Pleistocene lakes. The largest of these plains is at the north-eastern corner of this area (U3A) and
Chapter 7.

though originally named "Goulburn Plains" is now known as the Gundary Plain. West of this are two smaller but similar areas - the First and Second Breadalbane Plains. South of Lake George, the Molonglo Plain (an ancient lake-bed) should also be noted (See Map 16).

To the north of this lake-and-plain area, the Tableland is drained by the Wollondilly and its headwater tributaries which flow in rather deep narrow valleys cut into the gently rolling surface of the uplifted peneplain. The rocks of this part are principally Devonian shales, tuffs, quartzites and limestones, Silurian slates, tuffs and limestones, Ordovician slates, phyllites and schists, together with some basalt and granite. One important physical feature of this area is the Cookbundoon Range which runs approximately north-east and south-west to the west of and parallel to the Wollondilly River near Sutton Forest.

The most closely settled portion of the Tableland during the 1820s lay between the lakes-and- plains and the St Vincent Ranges. The southern part of this area is drained by the Shoalhaven River itself, and the northern part by several short tributary streams.
Chapter 7.

which flow eastward to tumble into the Shoalhaven gorge a little to the south of its right-angle bend. (The Shoalhaven enters the gorge near Charleyong – See Map 3). Much of this area consists of Silurian and Ordovician strata with smaller areas of Devonian, but most important were the districts whose country rock is Devonian granite or porphyry. One of these lies to the south west of the Marulan Ramp in the Bungonia-Inverary district, and the other extends from Lake Bathurst southward to Boro, Bombay, and Jembaicumbene. (See Map 16). Along the Shoalhaven River and Jembaicumbene Creek there are some extensive areas of Recent and Tertiary alluvium and gravel.

The western part of the Tableland drains north-westward to the Lachlan, or to the Yass and Murrumbidgee Rivers. The most common rocks are granites (especially in the southern part) and Silurian and Ordovician sediments and metamorphics. This country is more maturely dissected than the eastern part of the Tableland and there is rather more surface relief than in the east. There are several low ranges, the most important being the Cullarin Range which runs along the western shore of Lake George and away to the north, and
Chapter 7.

the Mundoonen Range which forms the divide between the Lachlan and the Yass Rivers. To the south, the uplands merge into the valleys running between the ranges which bound the region. One of these valleys is particularly important: that occupied by the Murrumbidgee between the Tinderry and Mount Clear Ranges. This "Monaro Corridor" provides a route from the Tableland to the high plains of Monaro to the south.

The first stock to be moved into the south-western country beyond the Cowpastures were taken to Bargo during the drought of 1815. They belonged to Oxley and a Mr Moore, probably Thomas Moore of Liverpool, and were apparently grazed on the area of open woodland where the town of Bargo now stands. (See Map 14). Macquarie visited this place during his tour of Cumberland in 1815 and described it in his Journal:-

"On entering Bargo we found the country barren and very bare of feed for cattle, but on advancing a few miles into the country we found both the land and grazing improve a little but far from being very good. Here Mr Oxley and Mr Moore (with my permission) have large herds of horned cattle grazing; but so many of them have died that these gentlemen
Chapter 7.

intend removing them immediately from this
country."10

Oxley's stock were taken further afield and grazed in
the vicinity of the Wingecarribee but they had to be
withdrawn because of the hostility of the natives in
April 1816.11 At this time there was no track beyond
Bargo and Oxley's manager believed that no one had pre-
viously penetrated farther than Bargo.12 During 1817,
Charles Throsby, a retired surgeon farming at Glenfield
near Liverpool, explored the country in the vicinity of
the Wingecarribee River.13 In the following year.

10. Macquarie, Journals of Tours, p. 118.

11. See the evidence of P. Hart, Oxley's manager, be-
fore Bigge: B.T. 5, 2279-99. Also "Extracts from
a Journal of the Detachment of the 46th Reg't..."
C.S.I.L. 10(30-85), pp. 35-44. This contains the
following entry:

"Monday 22nd April 1816 ... was informed
by Mr Oxley's Stockmen, that a large Body
of natives had driven them from their Huts
in Wingee Wingee Charabie and plundered
them of every article they possessed...."

12. See P. Hart's evidence before Bigge: B.T. 5, 2279-
99.

13. Apparently the only record of this exploration which
is extant is a very rough sketch map. An Eye-sketch
of part of the Country South-west of the Cow-
pastures – taken by Mr Charles Throsby between 28th
July and 10th August 1817: Mitchell Library, Maps
transferred from Lands Department, List C, No 19.
Chapter 7.

Macquarie sent a party to try to find a route through this area to Jervis Bay which he was planning to colonize.

This party was led by Throsby and Meehan. They travelled through the Sutton Forest area and after making several attempts to find a way across the Shoalhaven gorge decided to separate, Throsby travelling downstream in search of a crossing place and Meehan proceeding upstream in the hope of rounding the headwaters of the river. Throsby succeeded in reaching Jervis Bay (this will be discussed in the next chapter), but Meehan after travelling a considerable distance to the south without seeing any possibility of reaching either a crossing place or the headwaters of the river decided to explore the country to the west of the gorge. He discovered Lake Bathurst and the Goulburn Plains. 14

During 1819 Throsby made a third journey

14. See Meehan's Memorandum and Remarks made on a Tour made by me by Order of His Excellency the Governor in order to try if a communication can be effected from Sydney to Jervis Bay by Land 3 March to 14 April 1818 : M.L. 090.
through this country and succeeded in finding a route from Sutton Forest to Bathurst whence he returned by way of the Blue Mountain road.\textsuperscript{15} (See Map 15) He was highly delighted with the discovery of this route and wrote to Macquarie:

"I now beg leave to congratulate your Excellency, on the prospect, of a communication being opened, not only with Bathurst, but also, with full as usefull, and extensive a country, without having occasion, to pass through the difficult, and barren tract, the present road passes, and which from the opinion I have formed, in returning through it, on my way home, must ever be attended with great and unprofitable expence."\textsuperscript{16}

Throsby's good opinion of the country between Sutton Forest and Bathurst begat such enthusiasm in Macquarie that he published an Order congratulating Throsby and describing the country as being, with few exceptions, "rich, fertile and luxuriant, abounding with fine Runs of Water, and all the happy varieties of Soil, Hill and Valley, to render it not only delightful to the View but highly suitable to all the Purposes of Pasturage and

\textsuperscript{15.} See "Copy of a Journal of a Tour to Bathurst through the Cowpastures commencing April 25th 1819": Throsby Papers 1810-21 (M.L. A1940).

Map 15 is a photographic copy of a map in the Mitchell Library's Australian Scrap Book, 1777-1866, page 54. The map is undated and bears no publisher's name. It is on the right-hand side of a double sheet folded down the centre on the left of which is a map of Van Diemen's Land. The number "LIII" at the top right-hand corner of the map sheet suggests that it comes from an atlas. It was probably published during the early 1820s. Though it purports to show Throsby's route from the Cowpastures to Bathurst (April 1819), the map is in other respects a close, but poor, relation to the one published in William Charles Wentworth's Description of the Colony of New South Wales (1819) from which it was probably redrawn.
Chapter 7.

Agriculture." The Order requested Throsby to accept 1,000 acres of land in any part of the "New Country" that he might choose and rewarded Throsby's companion, John Rowley, and his servants Joseph Wild and John Wait with smaller grants of land. Macquarie's high hopes for the district's development were expressed in a letter to Earl Bathurst:

"...the extended Range of rich fertile Country passed over by Mr Throsby between the Cow Pastures and the Plains of Bathurst will be fully equal to meet every Increase of the Population here, whether of Free Settlers or of others becoming so, who may reach this Country for many years, and will afford ample Scope for the Speculative Grazier and Farmer to Exercise their Industry to their own Benefit and to the Increase of Intercourse with the Mother Country by furnishing Wool, Hides, Tallow &c." 18

Throsby considered that the country to the south-west of Cumberland was far superior to that at Bathurst and was supported in this opinion by Meehan who informed the Governor, "I am very sure Bathurst cannot stand in competition with the country to the Southward - I have seen

The publication of Macquarie's Order and the publicity given to Throsby's opinion of the country he had discovered naturally enough brought a number of requests from settlers for grants of land or for permission to graze stock in it. Macquarie was not, however, willing to allow the country to be occupied until he knew the extent of the country suitable for grazing. One applicant, who wished to send his stock to the New Country, was refused permission because it was "intended to send a considerable proportion of the Government Flocks and Herds to graze in that Country, and until it is ascertained what quantity of disposable land there is in the new discovered country, no more private cattle will be allowed to be sent thither." (Throsby had already taken stock to the Wingecarribee). Permission was granted, however, for stock to be sent to Bathurst, and Hannibal Macarthur was promised a grant of land after a survey had been made but was asked not to move

20. Macquarie - Townson, 4 September 1819: B.T. 19, 2898.
Chapter 7.

his stock until the survey was completed.\(^1\)

While awaiting the surveyor's report Macquarie began to prepare the district for settlement. He arranged for Throsby to supervise the construction of a road from the Cowpastures into it and planned to send a number of small settlers to occupy farms there.\(^2\)

The road was not completed until the early part of 1821. It ran from Stone Quarry Creek (Picton) to the Wingecarribee and then turned west, crossed the Wollondilly and the Cookbundoon Range, and ended in the vicinity of Tarlo (See Map 16). It was about 75 miles long, 30 feet wide, and, in Throsby's words, opened "communication to a much more extensive, and desirable country further southward and westward, than has yet been examined."\(^3\)

The small settlers, like those sent to Bathurst, were given farms of 50 acres, one assigned

\(^1\) Macquarie - Macarthur, 4 September 1819: *King Papers*, i, 185-7 (M.L. A1976).

\(^2\) See Macquarie - Throsby, 21 September 1819: *C.S.I.L.* 13(60-87), 15-18.

\(^3\) Throsby - Macquarie, 3 February 1821: *C.S.I.L.* 15(1-49), 1-2.
Chapter 7.

servant each and rations for twelve months. But unlike the settlers at Bathurst they did not have a government station at hand to buy their produce and so their enterprise was short lived. Information concerning them is, however, rather scant. Throsby told Commissioner Bigge that though it was planned to establish six settlers (3 emancipated convicts, 2 free men, and one man "native born") in the district only five actually occupied farms. With one exception they had made little progress in their cultivation: the first year's wheat was not good though fine potatoes and vegetables were produced and their fruit trees appeared to be doing well. If they proved industrious, Throsby said, their farms were to be enlarged. He commented that the journey from their farms to Liverpool required four days with loaded carts, but made no comment on their success, or failure, to market produce profitably. It would appear, however, that even at the time Throsby was giving his evidence to Bigge (26th January 1821), some of the farms had been abandoned. James Macarthur who visited the farms on the 12th January 1821 noted in his diary that with the

exception of two settlers who were keeping cattle, the farmers had "run away". He commented "... it is absurd to settle those who have no other object than to grow grain at such a distance from Sydney the only market."  

Early in 1820 a belief that the "New Country" to the south-west was not as good as Throsby had represented became current: it was even suggested that it was, in fact, infertile. This opinion probably originated with Meehan. After the 1818 expedition there was apparently some difference between Meehan and Throsby respecting the country they had seen: Macquarie, in a rather apologetic note to Throsby, explained that he had accepted Meehan's assessment of the country because of the high regard he had for Meehan's judgement of land and soil, and had not doubted Throsby's veracity. In October 1819, Meehan accompanied Oxley in an examination of Illawarra and the lower Shoalhaven and returned to

25. See James Macarthur's Narrative of an Expedition into Westmoreland in Australia, 1821, p. 10 (M.L. C124). [Note that Macarthur uses "Westmoreland" for the district which subsequently became the County of Argyle].

Chapter 7.

Sydney overland by Throsby's 1818 route from Jervis Bay to Sutton Forest and the Cowpastures. He gave a most unfavourable report on the route from Jervis Bay to Sutton Forest (see Chapter 8) and, apparently, of the country in the vicinity of Throsby's station on the Wingecarribee. Throsby wrote to him commenting: "I am not sorry to learn you think the country about my establishment so inferior, as such I hope to be less troubled with neighbours...." 27

The Sydney Gazette began a paragraph describing the fine condition of cattle fattened by Throsby in the "New Country":

"An idea having originated of the infertility of the lands Southwestwards of the Cowpasture Plains; which were first examined by Charles Throsby, Esq., a proof to the contrary evinces itself in twelve head of horned cattle in a condition that would have reflected no great discredit upon Leadenhall Market." 28

But this "proof to the contrary" was not sufficient. The controversy continued and Governor Macquarie and Commissioner Bigge decided to inspect the country.

Chapter 7.

themselves. Macquarie travelled through the Cowpastures and Sutton Forest to Lake Bathurst where Bigge met him having come southward from Bathurst along Throsby's route accompanied by Oxley. From Lake Bathurst they visited newly discovered Lake George and later returned to Sydney via Sutton Forest.29

Bigge later explained to Earl Bathurst that he made the journey from Bathurst convinced that its importance lay "in the opportunity it afforded me of correcting the too sanguine expectations that had been announced in the Sydney Gazette by the Governor's authority."30 And in his third report he stated that "...neither Mr Oxley nor myself found reason to concur in the description of the Country that this gentleman [Throsby] transmitted to Governor Macquarie, nor in the facility that he considers it to afford for the passage

29. See Macquarie, Journals of Tours, pp. 141-66, and Oxley's "Remarks on the Country between Bathurst and Lake George including the Country South West of the Cowpastures, 1820": B.T. 21, 3688-3726. See also Oxley's Chart of Part of the Interior of New South Wales (Arrowsmith, London, 1822) portion of which is republished with Macquarie's Journals of Tours.

Chapter 7.

of cattle. On their return from Lake George, the Governor's party, including Bigge, stopped at the Macarthurs' "Camden" estate in the Cowpastures. James Macarthur records that up until this time they had been led to believe that the country beyond the Wollondilly, and especially the Breadalbane Plains, was "far superior ... to the Cowpastures." But that with the return of the Governor and Commissioner:

"...for the first time our ears were shocked with the report of all the country to the Westward of Wollondilly being bad - The Governor had been accompanied by Mr Throsby. He certainly still spoke favourably of the Country - The Commissioner however and all his party (Mr Scott, Mr Oxley, Fraser the Colonial Botanist & several others) concurred in describing the whole that they had seen as very bad, with the exception of a small portion about 20,000 acres, (which was named "Sutton Forest") .... I had already seen this in company with William, and knew it to be fine cattle Country: but unfit for sheep.

In this opinion, they agreed and said that to obtain a good sheep run it was absolutely necessary to go to Bathurst.

The road too, through Westmoreland to Bathurst was found to be impracticable for carts."32

32. James Macarthur, Narrative of an Excursion... 1821, pp. 5-7 (M.L. G124).
Chapter 7.

So much for the land which had raised such high hopes. Soon after his return to Sydney, Macquarie opened the area between the Cowpastures and the Cookbundoon Range to the Cumberland graziers whose stock had suffered so much from drought and lack of fodder (See Chapter 3). To what extent his inspection of the country influenced his decision to allow the graziers to occupy this area rather than the Bathurst District it is impossible to know. The preface of his Order stated that both he and the Commissioner had "ascertained, by personal Survey, that a large Portion of that Country is a rich Soil well adapted for the Purposes of Agriculture and Pasturage."  

Bigge certainly did not think that "a large Portion" of the country was suitable for grazing: he informed Earl Bathurst that the country between Bathurst and the Cowpastures "possesses no valuable quality either in soil or Timber", and that the area in the vicinity of Lakes George and Bathurst, including Goulburn Plains, "tho' capable of affording summer pasturage for sheep and cattle cannot in my opinion be considered as a valuable acquisition to the Colony."  

34. Bigge - Bathurst, 3 July 1821: B.T. 27, 6415.
Chapter 7.

Macquarie was not convinced that the country was "very bad". He does not appear to have been from his Journal in which he wrote that Goulburn and Breadalbane Plains contained "not less than fifty thousand acres of useful good land, fit for both purposes of cultivation and grazing, with a plentiful supply of fresh water ponds." Or was it that he would not admit having been too enthusiastic about Throsby's report? Or that he was trying to save face? Or that he did not wish to discourage settlers from going to the area? Certainly the decision to allow the settlers to pasture their stock in this south-western country allowed him to continue to reserve the Bathurst district for a more carefully planned permanent settlement. Or was it just that Macquarie, the optimist (especially in matters of land settlement), was no judge of the true worth of the country he saw?

Before continuing to discuss the settlement of these districts it will be well to note first something more of their exploration. It would appear that

35. Macquarie, Journals of Tours, p. 152.
Chapter 7.

in the course of his visits to the country south-west of Cumberland Throsby received from the natives, with whom he was always on the most friendly terms, news of a great lake called "Wer-ree-waa" and "of a considerable river of salt water (excepting at very wet seasons) called by the natives, Mur:rum:bid:gie, two days journey from the lake (Wee:ree:waa) and described by them, to communicate with the sea, at a great distance, pointing southerly...."36 It has already been noted that the Meehan-Throsby expedition of 1818 had been dispatched to find a route to the sea and several of the later journeys were made with this same object. The news of a river communicating with the sea was therefore important and Throsby played a major part in attempting to find it. (He did not live to know just how great was the distance to the sea by way of the Murrumbidgee). In August 1820 a small party which he sent out discovered the lake Wee-ree-waa which Macquarie and Bigge visited in October

and named Lake George. Throsby himself discovered the Murrumbidgee (probably somewhere near Tharwa to the south of Canberra) in April or early May 1821, but though the water "was strongly impregnated with a mineral taste" and the river therefore probably the Murrumbidgee spoken of by the natives, Throsby was convinced (by its north-westerly course and the mountains to the south and east) that it did not flow to the east coast. He thought it most likely that it would be found to end like the Macquarie and Lachlan in marshes, if it was not, indeed, a branch of the Lachlan. The country, he reported, "is superior to that we passed through when with His Excellency the Governor in November last; it is perfectly sound well watered, with extensive


Chapter 7.

meadows of rich land on either side the rivers; ... and, from the appearance of the country, an unbounded extent to the westward."\textsuperscript{39}

Throsby now hoped that it might be possible to reach Jervis Bay, or the coast further south, from the country to the south or east of Lake George; that it might be possible to pass around the head of the Shoalhaven Gorge and so find a trafficable road to the sea. Three attempts to do this were subsequently made. In each case the result was the same. A way was found but it was too difficult to be used by carts or livestock. In December 1821 both Throsby and Hamilton Hume made their way separately towards Jervis Bay. Throsby crossed the Shoalhaven well to the south of its right-angle bend and came up to Jervis Bay from the southwest. His return was via his 1818 route.\textsuperscript{40} Hume travelled eastward from Lake Bathurst to a "high hill some

\begin{itemize}
\item \textsuperscript{39} Australian Magazine, 1 (1921), 61.
\item \textsuperscript{40} "Copy of a Journal on a Tower to Jervis Bay by Charles Throsby"[26 November to 9 December 1821], and Throsby - Goulburn, 20 December 1821: Throsby Papers 1810-21 (M.L. A1940). Also S.G. 15 December 1821.
\end{itemize}
miles on the south-east side of Shoalhaven River, but more than 30 from the coast at Jervis Bay.\textsuperscript{41} He did not go to the Bay. The third journey was made early in 1822 following the discovery of the Clyde River flowing into Bateman's Bay. At Throsby's instigation, William Kearns, a "Colonial youth" who had accompanied Throsby to Jervis Bay in the previous December, journeyed southward and then eastward from Lake George to reach a hill about 9 miles south of Bateman's Bay. Because of the reputed hostility of the natives in this area he did not go further.\textsuperscript{42}

These explorations had outlined the major features of the Southern Tableland and established beyond reasonable doubt the impossibility of making a road

\textsuperscript{41} "A Journal Kept by Mr Hamilton Hume on a Tour through the Interior from Lake Bathurst to the Sea Coast" [27 November to 1 December 1821]: Berry Papers, xxvi, unpaged (M.L. Uncat. MSS 315). Also S.G. 29 December 1821 and 11 January 1822 (Quotation from S.G. 11/1/22).

\textsuperscript{42} "Copy of a Journal of a Tour to the Coast about Nine Miles to the Southward of Bateman's Bay; performed by Mr Wm Kearns in 1822..." [30 January to 21 February], and Kearns - Brisbane, 19 July 1824: both in Throsby Papers 1821-4 (M.L. A1941).
from the Sutton Forest or Lake George area to Jervis Bay, or in fact to the coast further south. In the north the great difficulty was the crossing of the Shoalhaven gorge, and in the south where the gorge could be crossed more easily, the ruggedness of the St Vincent Ranges was a major obstacle. Subsequent exploration of the Tableland country was by the stockowners and stockmen who sought and staffed sheep and cattle runs in the district. Before leaving the subject of exploration, however, two journeys which started at Lake George and led to the settlement of the country to the south and west should be mentioned. The first was made in 1823 when a party led by Captain M. J. Currie travelled southward into Monaro, and the second by Hamilton Hume and William Hovell who set out in 1824 to travel to Westernport — they actually reached Corio Bay, an arm of Port Phillip. This journey ranks amongst the most important in the history of Australian exploration.

43. See Currie's "Journal of an Excursion to the Southward of Lake George in New South Wales" [22 May - 14 June 1823] in Field's Geographical Memoirs on New South Wales, pp. 367-81; and Hovell's "Journal Kept on the Journey from Lake George to Port Phillip" in R.A.H.S.J. vii (1921), 307ff. Also S.G. 7 October 1824 and 10 & 17 February 1825.
Chapter 7.

The publication of Macquarie's Order of the 25th November 1820 opening the country between Bargo and the Cookbundoon Range, and that of the 9th December making the country beyond the Cookbundoon Range available to graziers and pastoralists, marked the beginning of the great outward movement of cattle and sheep which continued throughout the 1820s and into the "Squatting Age" of the 'thirties and 'forties. Until 1824 those desiring to move stock through the Cowra statures had to obtain permission to do so and the copies of the permits which were issued throw a good deal of light on the beginning of the outward movement. All together 60 permits were issued between November 1820 and March 1824 for almost 8,000 cattle and about 6,000 sheep to be taken to the New Country. A large portion of these were moved during 1821, and the times of greatest movement were the driest summer months. Almost all the permits were issued in the periods from November 1820 to May 1821, from August 1821 to March 1822, from November 1822 to February 1823, and from September 1823 to March 1824, and as they were valid for only a month, the stock were

44. Copies of the permits are in the C.S.L.M.P.
Chapter 7.

presumably moved during these periods. Very few stock were moved during the intervening months. The tickets-of-occupation which were issued between February 1822 and the end of 1825 (see Chapter 3) show that the animals were grazed in three principal areas and in several smaller and less important ones. The runs in the south-west were not as widely scattered as those in the Bathurst district, however, and disputes arising from alleged trespassing frequently arose. (See Maps 7 and 16). The first of the major areas to be occupied was the Sutton Forest area whose principal features have already been described. The second extended southward from Eden Forest, where Throsby's road crossed the Wollondilly, to Bungonia and Inverary on the western side of the Shoalhaven gorge. The greater part of this country is granitic and its light soils carried an open woodland similar in many respects to that on the Wianamatta Shale though having fewer, more widely scattered, and less attractive trees and rather coarser and clumpier grasses. The third and greatest area lay to the west and south of Goulburn Plains. To the south it consisted of wide treeless plains reaching to Lakes George and Bathurst, whence it continued south of Lake
Chapter 7.

George to the Molonglo Plains and from Lake Bathurst through the granitic and porphyritic country running southward to the gravels and alluvial areas on the Shoalhaven River. To the west of the Goulburn Plains it included the Breadalbaine Plains and the country drained by the headwaters of the Lachlan in the vicinity of present-day Gunning, another granitic area. Of these districts the most closely settled was probably the granitic and limestone country in the Marulan-Bombala-Bungonia-Inverary area. Less important than these three major grazing districts were the runs established in a number of localities on their fringes: in Burragorang Valley, which is a sunken, southern end of the Permian "shelf"; on the Abercrombie River where it was crossed by the track to Bathurst; at Lake Burra Burra (or Burrah Burrah) to the north of the source of the Wollondilly; in the wide valley of the Yass River at Gundaroo; and on the Limestone Plains, present site of Canberra. In each of these areas ancient lake bed deposits, or soils derived from granite, shale or limestone carried either a natural grassland or an open woodland vegetation which attracted the pastoralists.

The want of precise information makes it
difficult to assess the progress of the district's permanent occupation by the holders of grants of land. The first grants to be promised were those offered Throsby and his companions in May 1819, and it would appear that several people besides Hannibal Macarthur (who was mentioned earlier) obtained promises of land later that year. The Order of 25th November 1820 warned those about to take stock into the south-western country that the land which was being made available to them "will be shortly located and granted" and that they were to be ready to move their stock at two months' notice. The grants made to Throsby and several other folk were apparently located at the end of 1820 or early in 1821: in April 1821, James Atkinson, one of the first settlers to occupy a farm on the Wingecarribee, received permission to take stock through the Cowpastures to his farm - the permit stated that he was proceeding to his farm.  

A number of permits issued during the latter part of 1821 and the early months of 1822 noted that the person concerned was going to a farm at Mittagong or on the

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Between 1822 and December 1825, the progress of the granting of land in the south-western districts is obscure. There appear to be no maps like those that are available for both the Hunter Valley and Bathurst district showing the area of land granted (See Maps 10-13), and the records of the land grants that were made are not complete enough to allow such a map to be constructed - there is almost no data at all for the period 1822-5. The general survey of the district did not begin until late in 1823, when William Harper, one of the assistant surveyors, was ordered to make a survey of Argyle marking the boundaries of square "townships" as had already been done in the Hunter Valley and at Bathurst. He was told that though he would meet many people in the district with orders for grants of land he was not to mark out farms or assign portions of land to individual settlers without first making reference to the Surveyor General. So it appears safe to assume that no

46. See, for example, the permits in C.S.L.M.P. October 1821-March 1822, pp. 24, 232, 376, 378 and 388.

Chapter 7.

grants were given outside Sutton Forest until the end of 1823 or the beginning of 1824. The fact that the tickets-of-occupation for Goulburn Plains were withdrawn during 1824 supports this assumption. 48

Though the evidence is rather scant, it would appear that the distribution and extent of granted land in 1829 was very similar to the distribution of ticket-of-occupation runs in 1825 with the addition of a few newly settled areas in the upper Wollondilly basin and to the east of the Shoalhaven River. The greater part of the Sutton Forest basin had been granted and grants had been given at Tarlo, Strathaird, Burrah Burrah and Bolong to the north-west of the Wollondilly; at Mummel, Pejar and Cullen Gullen on the upper Wollondilly; on the Goulburn and Breadalbane Plains; at Marulan, Bomballa, Bungonia and Inverary; around Lake Bathurst and on the east and south of Lake George; on the Limestone and Molonglo Plains; at Gundaroo and Murrumbateman (or Murrumbateman); at Michelago on the Murrumbidgee; at Boro, Bombay, Jembacumbene and Curwary on the upper

Chapter 7.
Shoalhaven; and at Nerriga on the eastern side of the Shoalhaven.\textsuperscript{49} (See Map 16) Assuming that half of the alienated land in the census district "Camden and Illawarra" was in the Sutton Forest area, then at the 1828 census about $29,000$ acres of land had been alienated in the south-western districts. This represents about $15.5\%$ of all the granted land in the colony, rather less than the land occupied by settlers in the Hunter Valley, and about $5\%$ more than was alienated in the Bathurst district.\textsuperscript{50}

The fact that the figures for the 1828 Census include the coastal areas with the Southern Tableland makes it difficult to assess the progress of the district's development. It is, however, quite obvious that

\textsuperscript{49} See: "List of Persons whose Lands were Measured and set out by the Late Surveyor General, Previous to the 31st March 1828 - No 1" (Lands Department Papers, M.L. A1653) and the "Return of all Grants or Appropriations of Crown Lands without Purchase from 19th December 1825 to 31st October 1837, inclusive" (Colonial Secretary's Returns of Appropriations of Crown Lands 1825-37, M.L.).

\textsuperscript{50} See Appendix 10. The figures are those of "Argyle and St Vincent" plus half the figure for "Camden and Illawarra".
Chapter 7.

the district was primarily a cattle grazing one, though sheep were also raised. Argyle and St Vincent, without Sutton Forest, grazed almost 30% of the colony's cattle and about 25% of its sheep; it was the most important cattle raising area and ranked second to Bathurst in numbers of sheep. It seems that the type of settlement in Sutton Forest and that in Argyle and St Vincent were rather different. In the remoter areas the pattern of land use was very much like that at Bathurst while in the Sutton Forest area it was more like that in the Hunter Valley. In the one there was a high degree of absentee proprietorship and very little agriculture; in the other there were more resident settlers and a marked development of stock-and-crop farms. In Argyle and St Vincent there was little cultivation, its share of the colony's crop land amounting to only 4.3% and the proportion of the alienated land under cultivation was only slightly more than 1%. The Sutton Forest area, however, must have been one of the most intensively cultivated areas outside Cumberland: in the Camden-Illawarra census district 2.2% of the alienated land was under crop — a slightly higher percentage than in the Hunter Valley where about 2% of the alienated land
(excluding the Australian Agricultural Company's grant) was being cropped. As there was little agriculture in Illawarra at this time the bulk of the crop land would have been at Sutton Forest and in the Picton (Stonequarry Creek) area.

The 1828 Census provides details of 102 properties in the four south-western districts, Sutton Forest, Argyle, Goulburn Plains and St Vincent. An analysis of the statistics for these properties is given in Appendix 17. As the situation on many of these properties was very similar to that in the two districts that have already been described, it is not proposed to discuss them at length, but merely to note some of the important features emerging from them. The first of these is that the proportion of properties of various sizes was very similar to that in the Hunter Valley with but one exception: in the south-west holdings ranging from 500 to 999 acres were most numerous and constituted 20% of the number of properties - in the Hunter Valley holdings in the 2,000 to 2,999 acre group formed 21% of the number of holdings. The percentage of holdings of all other sizes was almost the same in the two districts. But this is not to say
that in the south-west there was a range of farming activities extending from small horticultural farms through moderately sized, well developed stock-and-crop farms to extensive sheep or cattle runs. There may have been people in the south-western districts whose holdings of land were small, but their activities were not in proportion: they owned quite large herds of cattle and sheep and were small-holders not small farmers and must have been using quite extensive areas besides their holdings. A second point to be noted is that in this sample of land owners, there was a low proportion of free immigrants and a high proportion of "currency lads" similar to the proportions of these two classes noted in the district's adult male population. Only 35% of the sample holdings were owned by free immigrants who owned 64% of Hunter properties and 44% of those at Bathurst. Men born in the colony, however, owned 17% of the holdings in the south-west but only 9% of those in the Hunter and 13% of those at Bathurst. Thirdly, it will be noticed that the percentage of the land cultivated, the size of the cultivated areas, and the proportion of the properties raising crops were smaller in the south-west than in any other area: only
Chapter 7.

1% of the land held in the district was being cultivated and even the small holders (1-99 acres) had only 16% of their land under crop, there were no areas of more than 100 acres being cultivated, and only 78% of the farms had land under cultivation. Fourthly, the district's predominating interest in cattle raising rather than sheep raising is reflected in the facts that while only 8% of the settlers kept no cattle, 67% pastured no sheep. While its flocks were of about the same size as those in the Bathurst district, its herds were much larger: 45% contained more than 200 head, but only 26% of the Hunter Valley properties and 39% of the Bathurst ones kept herds of more than 200 beasts.

Except for the smaller amounts of cultivated land and the emphasis on cattle rather than sheep, the bulk of the district's farms were very much like those in other districts. Only the small holders' farms were different in character. The following table gives the particulars of nine farms typical of those on the Southern Tableland (none of these farms was in the Sutton Forest area):—
<table>
<thead>
<tr>
<th>Acres held:</th>
<th>7</th>
<th>30</th>
<th>150</th>
<th>320</th>
<th>560</th>
<th>1280</th>
<th>2800</th>
<th>4085</th>
<th>10,560</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated (acres)</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>-</td>
<td>30</td>
<td>10</td>
<td>14</td>
<td>85</td>
<td>64</td>
</tr>
<tr>
<td>Horses:</td>
<td>24</td>
<td>2</td>
<td>20</td>
<td>6</td>
<td>20</td>
<td>8</td>
<td>5</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Cattle:</td>
<td>700</td>
<td>77</td>
<td>300</td>
<td>129</td>
<td>350</td>
<td>219</td>
<td>514</td>
<td>395</td>
<td>561</td>
</tr>
<tr>
<td>Sheep:</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>300</td>
<td>-</td>
<td>1700</td>
<td>5,062</td>
</tr>
</tbody>
</table>

Reference to 1828 Census:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Page</td>
<td>87</td>
<td>15</td>
<td>282</td>
<td>198</td>
<td>174</td>
<td>31</td>
<td>12</td>
<td>93</td>
<td>11</td>
</tr>
<tr>
<td>No</td>
<td>324</td>
<td>332</td>
<td>3071</td>
<td>3760</td>
<td>2713</td>
<td>40</td>
<td>265</td>
<td>1519</td>
<td>224</td>
</tr>
</tbody>
</table>
Chapter 7.

In the Sutton Forest area, the farms were more intensively used: they were more like the farms in the Hunter Valley than those elsewhere in the colony. Not only did they contain a higher percentage of cultivated land, but they generally ran both sheep and cattle. The following are examples of the larger farms in the Sutton Forest district:-

<table>
<thead>
<tr>
<th>Acres held:</th>
<th>300</th>
<th>800</th>
<th>1,760</th>
<th>4,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated (acres)</td>
<td>4</td>
<td>28</td>
<td>86</td>
<td>25</td>
</tr>
<tr>
<td>Horses:</td>
<td>1</td>
<td>13</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>Cattle:</td>
<td>100</td>
<td>425</td>
<td>184</td>
<td>1,010</td>
</tr>
<tr>
<td>Sheep:</td>
<td>-</td>
<td>413</td>
<td>974</td>
<td>-</td>
</tr>
</tbody>
</table>

Reference to 1828 Census:

<table>
<thead>
<tr>
<th>Vol</th>
<th>R-S</th>
<th>A-B</th>
<th>A-B</th>
<th>M-Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page</td>
<td>90</td>
<td>37</td>
<td>31</td>
<td>61</td>
</tr>
<tr>
<td>No</td>
<td>421</td>
<td>20</td>
<td>723</td>
<td>321</td>
</tr>
</tbody>
</table>

Some of the farms in the Marulan-Bungonia area which were being developed by resident proprietors were similar to these.

In general, the greatest difficulty to be overcome by the settlers in the south-western districts was that of distance from Sydney and the market. Many of the
Chapter 7.

stockholders owned Cumberland properties on which their cattle could be fattened before being marketed and this gave them an advantage over those whose stock had to be taken straight to market, but as the road from the Goulburn Plains, or other parts of the south-west, did not pass over any great expanse of Hawkesbury Sandstone, and as there was no steep ascent to or descent from the plateau, the journey to and from Sydney was neither as difficult nor as time consuming as that from Bathurst. Like the settlers on the western side of the Blue Mountains, those to the south-west were troubled from time to time by both aborigines and bushrangers, but neither group was as numerous nor as troublesome as it had been at Bathurst and neither impeded the progress of the district's settlement to any extent. As in the other districts, reserves for villages were marked out as the survey proceeded, but prior to 1829 there was no real development of a town although constables were stationed at several places which later became townships.

In the Hunter Valley and Bathurst districts the character of settlement was determined to a large extent by the circumstances of the area's occupation. In
the Hunter Valley, the lateness of its settlement and the fact that the bulk of its settlers were free immigrants led to the development of stock-and-crop farming and a fairly high degree of resident proprietorship; in the Bathurst district, on the other hand, the difficulty of access and Macquarie's careful restriction of its settlement led to the development of the area as a grazing land used for the most part by well established Cumberland settlers: that is to say, an area devoted almost exclusively to sheep and cattle raising and with a high degree of absentee proprietorship. In the south-west, the problem of access was not as great, but the best areas were small and rather widely scattered. This was, no doubt, the real basis of the dispute concerning its usefulness and the reason that it was made available without any restriction to anyone who cared to move stock to it. The result was that it was occupied not only by the large stockowners, but also by small settlers and folk without farms who merely owned a few cattle, and so showed a markedly different population structure and character to that in either of the two regions already discussed. As at Bathurst remoteness acted against the development of agriculture which, except at Sutton Forest,
Chapter 7.

was confined in the main to supplying local requirements of wheat and vegetables. In the Sutton Forest area where the soils were better than in other parts of the district and where the distance to Sydney was not as great agriculture could be carried on successfully, but apparently not by small farmers. Throughout the greater part of the period ending in 1829 it was felt that the real key to the successful development of the district would be the discovery of a short and easy route to the coast whence goods could be shipped cheaply and quickly to Sydney: the fact that the coast south of Sydney possesses no really good harbours appears to have been overlooked.
To the south of Botany Bay where a narrow eastern extension of the Cumberland Plain reaches the coast, the eastern edge of the Hawkesbury Sandstone Plateau forms the coastline. Here narrow beaches and wave cut platforms lie at the foot of the steep scarp of the plateau. At Coal Cliff about 30 miles south of Sydney, however, the scarp and coastline begin to diverge and the narrow coastal plain of Illawarra comes between the two. The plain widens with increasing distance southward to reach its maximum width of about twelve miles some fifty miles south of Sydney. Further south it narrows again to end a little to the south of Kiama where a ridge running from the plateau to the sea divides it from the flood-plain of the Shoalhaven River further south, (See Map 14).

In the scarp of the plateau, sandstones and chocolate shales of the Narrabeen (Triassic) Group are found beneath the cliffs of the Hawkesbury Sandstone,
and beneath the Narrabeen rocks are the sandstones, shales and coal seams of the Permian Upper Coal Measures. Lower down are the rocks of the Upper Marine Series within which three separate formations are recognised: the "Gerringong Volcanics", "Berry Shale" and "Nowra Sandstone". The greater part of the Illawarra Plain and part of the foothills skirting the northern part of the Shoalhaven delta consists of the tuffs, tuffaceous sandstones and latites of the Gerringong Volcanics (See Map 14). In Illawarra these form the hills and ridges between which some quite extensive areas of ill-drained alluvial materials have been deposited by the short streams flowing from the scarp to the lagoons along the coast.

The Illawarra Plain may be divided into three sections. The northern one consists for the most part of a series of ridges and valleys set more or less at right angles to the coast. Rocks of the Upper Coal Measures form the ridges, and the valleys, though short, have, in some cases, remarkably large alluvial flats in their floors. The coastline in this part of the plain is characterised by a series of headlands and gently curved beaches. Most of the streams empty into small lagoons behind the beaches. (See Plate 4). The second section of the plain extends from Wollongong in the north to Bass Point in
Chapter 8.

the south. Its country rocks are those of the Gerringong Volcanics and its streams empty into two lagoons: a small one, Tom Thumb Lagoon between Wollongong and Port Kembla, and a large one further south, Lake Illawarra. This part contains the most extensive areas of alluvial flood plain, the largest being those of Mullet Creek which flows into the northern end of Lake Illawarra, and of Macquarie Rivulet flowing into its southern end. This part of the plain is also the widest, the greatest east-west extent being found in the valley of Macquarie Rivulet. To the south a ridge which juts out into the sea to form Bass Point separates the valley of Macquarie Rivulet from that of the Minamurra River which constitutes the third section of the plain. In this valley too there are extensive areas of ill-drained alluvium the largest being Terragong Swamp on the middle course of the river. The Minamurra's alluvial deposits are rather more fertile than those to the north. This is because there is an outcrop of Bong Bong Basalt (a fine grained, aphanitic, Tertiary basalt) in the Upper Coal Measures of the scarp. This basalt weathers to produce a rich chocolate coloured loam some of which has been washed down the scarp and incorporated in the sandy
Chapter 8.

and clayey material from the Triassic and Permian sandstones and shales to produce particularly rich alluvial flats.

To the south of the Minamurra a high ridge divides the Illawarra from the Shoalhaven Plain. This ridge extends eastward from the Barren Ground, a particularly sterile part of the plateau sparsely vegetated with stunted shrubs, to end in a series of narrow valleys and ridges on the coast a few miles south of Kiama. The ridge is largely composed of Bong Bong Basalt but its most outstanding feature, Saddleback Mountain, is the remnant of a volcanic neck consisting of agglomerate and breccia. In this ridge, and in the plateau scarp further south, the basalt forms a shelf which makes a very pronounced break in the scarp at an elevation of about 1,200 feet.

A line of hills runs southward from the Saddleback Ridge to Mt Coolangatta, a peak on the northern side of the mouth of the Shoalhaven River. These hills divide the part of the Shoalhaven Plain to the north of the river into two sections. On their east there are two small river valleys in the north, and south of
Chapter 8.

these a series of swamps which are filled-in lagoons. To their west, there is an extensive alluvial flood plain traversed by Broughton's Creek which rises on the Saddleback ridge and flows southward to the Shoalhaven. The central part of this flood-plain is swampy and reedy, but the margins are fairly well drained and originally carried a fine natural grassland. Fringing the alluvial deposits there is a belt of foothills and ridges (which includes the Saddleback-Coolangatta line of hills) composed of siltstones and shales of the "Berry Shale" formation. In the north and west these give place to steeper slopes and the Gerringong Volcanics which at an elevation of about 600 feet merge into the still steeper slopes of the plateau scarp proper. The scarp is broken by the basalt shelf at about 1,200 feet and then continues to the foot of the Hawkesbury Sandstone cliffs whose summits reach an elevation of about 2,000 feet.

In the west and south the Shoalhaven Plain is bounded by the low plateau of the Nowra Sandstone. This

1. Mt Coolangatta, which rises to 992 feet, is capped by rocks of the "Gerringong Volcanics" group.
Chapter 8.

is a coarser sandstone than the Hawkesbury, but like the plateau of the Hawkesbury Sandstone, its surface exhibits an even, almost level sky-line though it is dissected by the canyons of the streams draining it. The southern part of the Shoalhaven Plain (to the south of the river) is swampy in parts, and is drained by the Crookhaven River, a small creek rising near Nowra and flowing south-easterly into Crookhaven, the inlet extending south-westerly from Greenwell Point on Map 14. The swamps along the lower part of the Crookhaven River are salty and the edge of the flood-plain adjoining Crookhaven itself is lined by tidal mangrove swamps. On its coastal side the plain is fringed by sand dunes. To the south-west of Nowra, which is situated on the river at the junction of the sandstone and alluvium, an outlier of the Berry Shale gives rise to the one significant break in the otherwise flat surface of the Nowra Sandstone plateau: Nowra Hill which rises to 633 feet. The general level of the Nowra Sandstone Plateau is about 200 feet in this area but it should be noted that it rises gradually to both the south and west.

IN Illawarra and Shoalhaven there is the same
close relationship between soil type and vegetation association which has been noted in other areas. The swampy lands were reedy where the water was fresh, and occupied by a casuarina scrub where it was brackish or salty. The better drained alluvial soils bore fine grasses and few, or no, trees. These grasses were finer and more attractive as pasturage than the clumpy and rather wiry grasses of the interior grasslands. Names like Fairy Meadow, Farmeadow, and Meroo Meadow are suggestive of the original appearance of these areas. On the river banks there appear to have been some patches of rain-forest. The drier parts of the hills bore a woodland association of trees and grasses, but the gullies and the wetter hillsides, like the plateau scarp, were clothed with a dense sub-tropical rain-forest. The distribution of rain-forest appears to be determined more by conditions of soil moisture and protection from drying westerly winds than by the nature of the soil itself.

The Illawarra-Shoalhaven coast consists almost entirely of a series of headlands and beaches. In one or two places there are small coves protected by headlands, but for the most part there is no harbour or safe landing
place for boats of any size. The entrance to Lake Illawarra and the mouth of the Shoalhaven River are both narrow, shallow and treacherous because of the sandbars obstructing them, while Crookhaven's entrance is surrounded by rocks and shoals - its original name was "Shoals Haven". The absence of sheltered bays and the heavy surf on the beaches made access to these districts from the sea as difficult as the steep scarp and cliffs of the plateau made it difficult from the land. All in all, Illawarra and Shoalhaven were the most inaccessible of all the districts settled prior to 1829: the problem of transportation was the major one confronting their would-be settlers.

The Illawarra-Shoalhaven coast may be said to have been "discovered" by Captain Cook in 1770. He certainly saw very little of it for he was several miles off-shore as he sailed northward, but he marked some of the most outstanding landmarks on his chart and named them: Pigeon House, Cape St George, Long Nose (later Bass Point), and Red Point. Thus, despite the fact that he

2. See Journals of Captain James Cook (ed Beaglehole), i, 301-4 & Fig 42. Also Chart XX in the folio of "Charts and Views".
Chapter 8.

did not land (an unsuccessful attempt was made somewhere near Wollongong), he has some claim to a place in the history of the district's discovery.

Subsequent discoveries were also made by sea. In 1791, Jervis Bay was discovered and named, and in March 1796 George Bass and Matthew Flinders landed on the coast near Lake Illawarra. Later, in August 1796, Bass went to Coalcliff to examine the seam of coal there which was first observed by a party of ship-wrecked sailors making their way along the coast to Sydney. None of these visits added very much to knowledge of the district though they did draw attention to the coast's want of harbours - Jervis Bay was the only one so far found - and the difficulty of landing on it. Bass, however, did mention the district's luxuriant vegetation.

The first important exploration of this coast


Chapter 8.

was made by Bass in 1797-8. He set out in a whaleboat intending to examine the coast carefully and fill in the detail between the few outstanding features which were marked on the charts then in use. His journey took him as far as Westernport and led to the discovery of Bass Strait, but, so far as the area under consideration is concerned, Bass returned to Sydney with two major discoveries. First, that Jervis Bay appeared to be the only really good harbour between Port Jackson and Westernport, and second, that at the mouth of the Shoalhaven there was an extensive area of attractive country. Bass reported that at Shoalhaven there was much "open ground...whose soil is a rich vegetable mould" but he also commented that:

"However capable the soil of this country might, upon a more accurate investigation, be found capable of agricultural improvement, certain it is that the difficulty of shipping off the produce must ever remain a bar to its colonization. A nursery of cattle might perhaps be carried on here with advantage, and that sort of produce ships off itself."

5. See Bass's "Journal of a Whaleboat Voyage.... 1797-8": H.R.N.S.W. iii, 289ff.

Chapter 8.

In 1804 when Governor King began to fear a shortage of land in the colony (See Chapter 3), he contemplated placing a settlement on the Shoalhaven. To Lord Hobart he wrote that "of the country about Shoal Haven a very advantageous account is given" and to Sir Joseph Banks he outlined his intentions:

"After as many settlers as can be fixed are placed at Fort Dalrymple & the Rivers at Newcastle it will be advisable to examine Shoals Haven of which Bass gives so good an account."\[7\]

Early in 1805 he sent a party led by Lieutenant Bartholomew Kent of H.M.S. Buffalo, and James Meehan the Assistant Surveyor General, to examine the Shoalhaven area more closely. Their report was summarised by King:

"The Officer and Surveyor who I sent to examine the country about Shoals Haven, report much good Land on the Banks of two small Bar Rivers, which will hereafter prove of great Benefit to

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   King - Banks, 7 December 1804: Banks Papers, vii, 243ff (M.L. A78-6).

8. See: S.G. 27 January, 3 February and 10 March 1805;  
   Field Books 32, 31 and 38 (in that order) contain the notes made in the area; and An Eye-Sketch of Shoals Haven ... by James Meehan, 1805 (M.L.)
Chapter 8.

the Extension of these Settlements."^9

As mentioned in Chapter 3, the settlement of the forest-lands of Cumberland removed the need to occupy any new area and the Shoalhaven, and Illawarra, remained neglected until 1812. In the intervening years the crews of a number of ships wrecked on the coast made their way through the Shoalhaven and Illawarra districts to Sydney, but we have no descriptions of these areas attributed to them.10

In November 1811, Governor Macquarie, en route to Van Diemen's Land, was obliged to put into Jervis Bay to escape bad weather, and "had the satisfaction to find a safe and very extensive Harbour,... which promises fairly to become of importance to the colony." On his return to Sydney, Macquarie sent G. W. Evans, who later discovered the Macquarie River, to examine the bay and Evans "Volunteered to discover his way back by land."12

10. See, for example, S.G. 5 May 1805 and 18 May 1806.
His object in doing this was to find a route from Jervis Bay to Appin at the southern end of the Cumberland Plain. After leaving Jervis Bay his party travelled to the north-west, crossed the Shoalhaven somewhere near the present site of Nowra, and climbed the plateau scarp to the foot of the cliffs. Attempts to scale the cliffs failed and they made their way north-eastwards towards the coast travelling (apparently) along the scarp near the foot of the cliffs. They appear to have reached the sea near Omega and then followed the coast northwards for a considerable distance before striking north-westwards once more, and with great fortitude and endurance succeeded in climbing to the surface of the plateau and making their way to Appin. Though this journey did not achieve its purpose, it was important because it showed, first, that there would be few places, if any, where a satisfactory road could be made from the coastal plains to the Cumberland Plain, and second, drew attention to the swampy nature of much of the Shoalhaven and Illawarra districts and to the timber to be found on the
Chapter 8.

banks of the Shoalhaven and the mountain sides. ¹³

Between 1812 and 1814 a number of small ves-
sels went to the Shoalhaven to obtain cedar, but
skirmishes between the crews of these vessels and the
aborigines probably led Macquarie to stop this cedar
getting in December 1814.¹⁴ These skirmishes, and the
murder of several of the cedar getters gave the natives
of this area a reputation for ferocity and savagery
which probably led to its being neglected until 1822.

With the advent of the drought years following
1812, the Illawarra district was occupied by graziers.
The date of the commencement of this settlement and the
circumstances under which it was made are unknown, and
so is the route by which the stock were driven into the

¹³. See Anonymous Journal of an Expedition Overland
from Jervis Bay to Mr Broughton's Farm near Appin,
25 March 20 17 April 1812; attributed to G. W.
Evans (M.L. C709) and two maps of the Jervis Bay-
Shoalhaven area apparently drawn by Evans in the
Mitchell Library's collection of maps transferred
from the N.S.W. Lands Department (List C, Nos 13
and 15).

¹⁴. The cedar getting in the Shoalhaven district between
1812 and 1814 is discussed in greater detail in the
author's paper in the Australian Geographer Vol vi,
No 3 (May 1954).
Chapter 8.

The earliest reference to settlement in Illawarra is in a letter written in December 1815 by a grazier and merchant, who had moved stock into the district without first obtaining permission and wrote asking that he be allowed to leave his cattle there. From this letter it is clear that several people had driven cattle into Illawarra (apparently with Macquarie's permission), prior to December 1815. One of them was probably Charles Throsby for later in the month Joseph Wild, one of his stockmen, was appointed "constable in the district of Five Islands" (Illawarra was sometimes referred to as "Five Islands" because of the five small islands lying off Fort Kembla). During 1816 the Sydney Gazette reported that "The natives of the new Stock Settlement at the Five Islands are described as being amicably disposed toward us..." and that "Several Gentlemen have removed their cattle thither, as the neighbourhood affords good pasturage...." Some of these "Gentlemen" had been promised grants of land and

17. S.G. 28 September 1816.
in November 1816, they were asked to meet the Surveyor General at "Mr Throsby's stockman's hut" to locate their land and have it measured. The first grants of land in Illawarra were issued in January 1817 and by March 1821, thirteen grants had been given. Most of them were fairly large, three were of less than 1,000 acres, and three were for 2,000 acres or more. In a despatch written in December 1817, Macquarie stated that he had given grants in Illawarra to "some respectable new settlers", but his statement in a later despatch that the grants had been given to a "few settlers possessing numerous flocks and herds" was nearer the truth. Among the recipients of these grants were former Commissary-General David Allan and his son David, a clerk in the Commissariat; Richard Brooks, a free settler and magistrate; Thomas Davey, a former Lieutenant-Governor of Van Diemen's Land; Robert Jenkins, an auctioneer and director of the Bank of N.S.W.; George Johnston, the insurrectionary Lieutenant-Governor who had arrested Bligh; George Molle, Lieutenant-Governor of N.S.W.;

Chapter 8.

Samuel Terry, a Sydney merchant; D'Arcy Wentworth, Principal Surgeon; and his son, William Charles Wentworth, who had taken part in the crossing of the Blue Mountains. This list gives an insight into the calibre of the men whom Macquarie considered "respectable". The grants were all situated around Lake Illawarra, most of them being at its southern end and on Macquarie Rivulet. (See Map 7). A few, however, were located on Mullet Creek and at the northern end of the lake. None of these men went to live on their grants which were occupied for many years by only their cattle and stockmen. Besides these landowners, a number of other persons appear to have been grazing cattle in Illawarra. Charles Throsby and John Oxley both had stock there, and Oxley grew wheat in the district. It did not do particularly well partly because of the "newness" of the soil and partly because the ground was not properly prepared for sowing.21 Oxley's general opinion of the country in Illawarra was that only about a third of the land would be cultivable though it was all good grazing country.

Chapter 8.

By 1819, most of the more accessible stands of cedar in the Hunter Valley had been cut, and the cedar getters turned their attention to the rain-forests of the Illawarra scarp. The timber was fallen, and sawn into planks in the forest and then carried up the scarp on men's shoulders and loaded into carts to be taken to Sydney. All this was, however, illegal: the government considered that all timber belonged to the Crown and in August 1819 published an Order prohibiting unauthorised cutting of cedar. Later licences were issued to cedar cutters who were allowed to go to Illawarra for a limited time to cut a specified quantity of timber.

The history of Illawarra's settlement during the 1820s is, like that of the south-western districts, obscure. Prior to 1826, however, a number of Tickets-of-Occupation were issued for the country between the granted lands and the plateau scarp. (See Map 7). During the years 1825-9, for which land grant records are available, a number of grants were taken up in Illawarra, some of them were quite large but many were


23. See Order 31 March 1821 and the copies of the licences issued in C.S.L.M.P.
Chapter 6.

small - 100 acres or less. From the descriptions of the locations of these grants, it would appear that most were situated around the shores of Lake Illawarra and in the central part of the plain. Some were, however, located in the Minamurra Valley and as far north as Bulli. In general it appears that the alluvial lands were occupied first, and the more hilly country afterwards.

The want of statistics makes it difficult to assess the progress of the district's development: its figures are included in the "Camden and Illawarra" muster and census statistics which also included both Sutton Forest and the part of the Cumberland plain lying to the south-west of the Nepean River. The 1826 Census throws some light on the situation, but as it lists only 46 settlers giving their residence as "Illawarra" conclusions drawn from this data must be somewhat suspect.²⁵

If these 46 properties are representative of the district's properties (which is doubtful), then it

²⁴ See the Colonial Secretary's Returns of Appropriations of Crown Lands, 1825-37 (M.L.)
²⁵ See Appendix 18.
would appear that in Illawarra there was a fairly high proportion of small farms (fewer than 99 acres) some of which were rented from large landholders and some actually in the possession of the farmer. Of 28 holdings of fewer than 99 acres listed, 17 were worked by tenants. Of the farms worked by their proprietors, the numbers in the three groups fewer than 99 acres, 100 to 999 acres, and more than 1,000 acres, were: 11, 12 and 6, which still shows a fairly high proportion of small farms. It may be, however, that many of the large-holders were not resident in Illawarra and so their properties would not be included in this sample, whereas most of the small-holders would certainly be resident. The sample, therefore, probably includes an unrepresentatively large number of small farms and a correspondingly small number of larger properties. This belief is supported by the available information on the land grants made in the district between 1826 and 1829. In these four years, at least 26 grants were given in Illawarra. Of these 7 were of fewer than 99 acres, 14 were of areas between 100 and 999 acres, and 5 were of
Chapter 8.

more than 1,000 acres. This is certainly meagre evidence, but it would be safe to say that in Illawarra there was a higher proportion of small and medium sized grants than in the other newly settled districts where large grants were more numerous.

The available evidence is not sufficient to support any strong beliefs about the utilization of the farms, but there are several points on which we can be fairly sure. First, that the district was primarily a cattle raising one, with perhaps a little dairying producing butter for Sydney. Second that there was, on the farms of the resident settlers at least, a fairly high proportion of cultivated land. On the 46 farms for which information is available, 3.2% of the land held was under crop, and while this is probably an inflated figure, it should be noted that on the 6 farms which exceeded 1,000 acres in size, 1.6% of the land was cultivated, a proportion only slightly smaller than that for farms of the same size in the Hunter Valley. This cultivation probably resulted from the use of small boats to take produce to Sydney lowering the cost of

26. See the Colonial Secretary's Returns of Appropriations of Crown Lands, 1825-37 (M.L.)
Chapter 8.

transportation and so making agriculture an economically safe undertaking.

Apparently the settlers preferred to risk their produce in small boats than to bear the cost of land carriage to Sydney. During 1821 the settlers in the district subscribed money to have a road made from Appin into the district, but it was merely "a good bridle-road" which could be used by cattle and was not, in 1822 at least, usable by carts. Writing in 1825, a man who later settled in Illawarra, stated that "water carriage is the only means settlers have of sending their produce to market" so it would appear that at that time the road was still used by stock only. The boats taking produce to Sydney apparently used Red Point and the entrance to Lake Illawarra as their principal landing places but neither was well protected and boats were frequently wrecked or damaged at these and other places.

Unfortunately, travellers in Illawarra were

27. S.G. 18 January 1822. See also Macquarie's Journals of Tours, p. 242-3.
29. See, for example, S.G. 5 May 1821, 26 July 1822, and 24 March, 1825.
Chapter 8.

so vastly impressed by the precipitous descent from the plateau to the plain, and by the luxuriance of the rainforest, that their accounts of the district are rather overweighted with descriptions of the scenery and say little about the settlers or their activities.\textsuperscript{30} One of these is, however, worthy of quotation, partly because of the description it affords, and partly because it embodies a fairly typical appraisal of the district as seen by the early settlers. Peter Cunningham considers Illawarra to be a "romantic, singular" spot, and describes it:—

"Illawarra, or the Five Islands (fifty miles south of Sydney), lies between the ... range ... and the sea - the range hemming it so closely towards the Sydney side, that you have to crawl in a manner down the precipitous edge of the mountain to it, drawing your horse gently after you; for you dare not well attempt to ride. A cart-road consequently will never be very practicable here: nearly all the produce, therefore, must necessarily be transmitted to Sydney hereafter, as now, by means of boats. The moment you reach

\textsuperscript{30} See, for example, Peter Cunningham's \textit{Two Years in N. S. W.}, i, 107-8; Barron Field's "Journal of an Excursion to the Five Islands and Shoalhaven" in \textit{Geographical Memoirs of New South Wales}, pp. 460-9; and Macquarie's \textit{Journals of Tours}, pp. 235-44.
Chapter 8.

the foot of the mountain, an entire new scene opens upon your view, the country being quite distinct in its general features, as well as in the trees, shrubs, and even birds it produces, from anything you have seen in the colony. The tall fern, cedar, and cabbage-trees; the numerous creeping vines, climbing up and throwing their fragrant tassels of flowers downwards from the tops of the less lofty trees; the luxuriant growth of each vegetable product; with the red-crested black cockatoos, and large crested blue pigeons peculiar to this district, make you fancy yourself transported to some far-distant tropical region; to which the temperature, as well as the general features of the spot, bear a much closer resemblance than to the moderate latitudes wherein it is placed. The extent of cultivable ground is but small, and it is likewise exceeding closely timbered; but the timber being generally cedar, pays well for the cutting down, while the soil yields most abundantly all our colonial cultivated productions— a number of settlers being here located."

But while the details of settlement in Illawarra are obscure, there is an embarrassing amount of information on the settlement of the Shoalhaven, where one of the colony's most interesting establishments was located. It has already been noted that the Shoalhaven River and its flood-plain were discovered by Bass in 1797 and that although cedar getters visited

Chapter 8.

the area between 1812 and 1814, there was no settlement there until the 1820s. Interest in the district revived in the last years of Macquarie's administration in connection with the plan to settle Jervis Bay.

The advantages of Jervis Bay as a site for a settlement were, according to Macquarie, the fact that it was the largest and best harbour on the coast south of Sydney, that it was fairly close to Port Jackson and the "navigation hence and into it...perfectly safe", that it lay on the route used by shipping going to and from both Van Diemen's Land and Britain, and that it had "a very extensive tract of fertile land" (the Shoalhaven Plain) a few miles to the north. "I am of Opinion," he wrote, "that it would be good policy and add greatly to the Improvement and Resources of the Colony, if a Settlement were formed at Port Jervis, and the Country in the Vicinity Occupied by Industrious New Settlers."32 This was in December 1817.

In the following February, Throsby and Meehan set out to find a land route to Jervis Bay from the

newly discovered Sutton Forest district. Meehan's part in this expedition has already been discussed. Throsby, after parting with Meehan by the Shoalhaven Gorge, travelled downstream and apparently crossed the Kangaroo River before fording the Shoalhaven itself at Purreah (Burrier?). He was then able to travel south-eastwards to Jervis Bay with little difficulty. The descent from the scarp to the Shoalhaven River was, however, very difficult. It was, Throsby considered, "bad, as much so in one place as the Five Island Mountains" - the drop down into Illawarra was a criterion of steepness. Throsby did not see the alluvial flats bordering the Shoalhaven, but with characteristic optimism he reported that some of the forest country between the Shoalhaven and Jervis Bay was better suited to agriculture than grazing.  

By May 1818, Macquarie was urging the "necessity" of placing a settlement at Jervis Bay and looked  

forward to having "a Chain of Settlements and farms continued from thence, 'till they joined those already Extended from Port Jackson to Illawarra, with Land as well as Water Carriage All the way from Port Jackson to Jervis Bay, which Certainly would prove highly benefi-cial to the Colony."\textsuperscript{34}

But before Macquarie had made any move to establish a settlement at Jervis Bay, Oxley discovered Port Macquarie and attention was diverted to the possibility of moving the penal settlement and allowing settlers to occupy the Hunter Valley. Oxley also visited Illawarra, Shoalhaven and Jervis Bay to report on their suitability for agricultural settlement. In general Oxley found the country either barren or marshy, and was not impressed by its potential usefulness. He stated that there might be about 10,000 acres of alluvial land on the banks of the Shoalhaven but in the surrounding sandstone country he found "no place upon which even a cabbage might be planted with a prospect of success."

His general conclusion was:

\textsuperscript{34} Macquarie - Bathurst, 16 May 1818: \textit{H.R.A.} I, ix, 795.
Chapter 8.

"... whatever settlement it might be requisite to make, must in the first instance be established on the North bank of Shoals Haven River, the nature of Jervis Bay and the miserable country on the North and South shore, being sufficient to put all speculation as to forming a settlement on it entirely at rest. In my opinion, the success of any settlement on Shoals Haven River will altogether depend on the practicability of a tolerable road or pass being found to connect the country already known to the S W of the Cowpastures." 35

Meehan, who accompanied Oxley, returned to Sydney via Throsby's route, found that the track was "of the most impracticable description" and was convinced that "no safe or practicable communication was likely to be found." 36

To both Throsby and Macquarie these must have been rather disconcerting revelations: but neither appears to have been convinced of the truth of Oxley's report.

Macquarie informed Earl Bathurst that he still believed

35. See survey notes in Field Books Nos 142, 143, 146, 147, 149, 154, 155, 156 and 158 (M.L.). Field Book 156 contains Oxley's general observations on the country.
See also ... Oxley – Macquarie, 10 January 1820: H.R.A. I, x, 253-7.

Chapter 8.

that a practicable route would be found, and Throsby sent Macquarie a note which reveals something of Meehan's opinions and Throsby's feelings on the subject of a road to Jervis Bay:

"Memorandum:

Mr Meehan admits that he travelled with loaded horses from Jervis' Bay to my establishment in the new country, and that he found but one difficult ascent the whole way -

Mr Meehan admits that cattle (the only possible produce of the country for some tome to come) may travel that way with trifling trouble and expense in cutting a road -

Mr Meehan admits that Shoals Haven River itself forms no impediment whatever to a road being made -

Mr Meehan admits that the country between the Shoals Haven and Jervis Bay presents no difficulty for a good road -

Mr Meehan admits that the most valuable country for agriculture is on the banks and in the neighbourhood of Shoals Haven, from whence there is no doubt of a good road being formed.

Mr Meehan admits...." 38

and so on in similar vein. Throsby suited action to his


words and in November 1821 made a second journey to Jervis Bay crossing the Shoalhaven higher upstream than previously (possibly at Oallen) and coming up to the Bay from the south-west. He wrote in his journal that he had "ascertained to a certainty...the practicability of a road being formed whenever it shall be found necessary, so as to form a communication [between] Lake Bathurst, Lake George, Goulburn Plains, the whole western country and the sea at Jervis Bay." But he returned by his 1818 route!

By this time, however, the settlement of Jervis Bay was no longer a live issue. Plans were in hand for the removal of the penal settlement from Newcastle and the first free settlers were examining the Hunter Valley and choosing sites for their farms. So far as the government was concerned there would be no settlement at either Shoalhaven or Jervis Bay: but another man, Alexander Berry, had become interested in Shoalhaven.

40. Ibid.
Chapter 8.

Berry and his partner Edward Wollstonecraft had come to Sydney in 1819 and established a business in George Street. Like other merchants in the colony at that time, Berry and Wollstonecraft found that they would be obliged to accept stock in payment of debts and requested grants of land on which to pasture them.\(^1\)

Berry made several exploratory journeys along the coast seeking a suitable place in which to locate the grants that were promised them, and finally chose Shoalhaven. In June 1822 he occupied land at the foot of Mt Coolangatta and at Numba on the south side of the Shoalhaven opposite Coolangatta.\(^2\) Apart from the richness of the soil on the banks of the Shoalhaven, and the quantity of cedar growing in the gullies and on the mountain slopes, the fact that the area was unoccupied

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\(^1\) Berry's Memorial, 24 November 1819: C.S.I.L. 13 (60-87), pp. 147-50.

\(^2\) Re Berry's exploratory journeys, choice of Shoalhaven, and the establishment of the settlement, see the journals, letters and notes in the Berry Papers (M.L. Uncat. MSS 315, 31 vols), and Berry's Diary of an Expedition to Shoalhaven River, June 21 - July 23, 1822 (M.L. B897).
made it attractive. "Everybody was flocking to the Hunter River, Bathurst, and other places where there was already a settlement, and all were elbowing one another. But we neither wished to elbow any one nor to be elbowed...." After Governor Brisbane instituted his system of requiring grantees to maintain one assigned convict servant for every 100 acres granted to them, Berry and Wollstonecraft requested a grant of 10,000 acres and willingly agreed to maintain 100 convicts. It was some time before this grant was given final approval, but the land that was occupied at Shoalhaven contained, nevertheless, some 14,000 acres in three grants. Two were located on the south bank of the Shoalhaven and were individual grants of 2,000 acres to Berry and of 1,500 acres to Wollstonecraft. The larger grant of 10,000 acres lay to the north of the river and extended eastward from Broughton creek to include Mt Coolangatta and the hills on its north, but not the swampy country along the coast.

44. Re these grants, see the three volumes of Berry Estate Papers (M.L. A719-21).
Chapter 8.

There are, in the Berry Papers in the Mitchell Library, documents describing in detail the development of this estate, but it would be inappropriate to discuss it at length here. Suffice it to say that the land was used as an adjunct to the George Street business and was, in a sense, part of it: this was "mercantile farming", an example of what the economists would call "vertical integration". Unlike the other merchants who occupied land about this time, Berry and Wollstonecraft spent a good deal of money in bringing their land into production: they were not content merely to graze a herd of cattle in charge of a few stockmen, and Barron Field feared that "these grants will hardly ever repay Messrs Berry and Wollstonecraft for their outlay upon them..." But they did, and handsomely.

The first big item of expenditure was the purchase of a boat to carry goods between Sydney and the Shoalhaven. Upon occupying the land, Berry had a canal cut across a narrow neck separating the Shoalhaven River from an arm of Crookhaven. This allowed the boat to

45. Field, Geographical Memoirs of N.S.W., p. 467.
enter the river safely via Crookhaven instead of by the more treacherous mouth of the river. (This canal has since become the virtual mouth of the Shoalhaven). He also had a road made from the upper end of the valley of Broughton Creek, across the Barren Ground and down into the Minamurra Valley. But if money was spent freely, it was also made freely. The boat which carried the first party to Shoalhaven returned with a cargo of cedar and from that time timber was an important product of the estate. The grass growing on the banks of the river was cut, made into hay, and taken to Sydney for sale. Land was quickly brought into cultivation and potatoes, corn, tobacco and vegetables were grown to be sold in Sydney. Cattle and pigs were also raised. The outstanding characteristics of this settlement were the range of its interests, and their close relationship with the Sydney business. It is admittedly an exceptional case, but it nevertheless makes the point that the character of the settlement in each of the newly occupied districts was, to a very large extent, determined by the kind of settlers involved.

Southward of Shoalhaven, grants of land in a number of places were given prior to 1829, but these were
Chapter 8.

few and widely scattered. The only place where there were a number of grants in close proximity was near Bateman's Bay where several were situated on the lower part of the Clyde and Buckinbowra Rivers. It was only in this south coastal area that settlement was not pressing close to the limits of the Nineteen Counties. By 1829, settlers had taken stock across the Liverpool Range and onto the Liverpool Plains, and they were on the Talbragar and Lachlan, and close to the Murrumbidgee in the west and south-west. But although there were a couple of grants located on the Moruya River which was the southern boundary of the "settled area", they were not there in sufficient numbers to suggest that settlement was about to pass outside the limits.
Chapter 9.

SUMMARY AND CONCLUSIONS

It was stated in the Introduction that this study is conceived as belonging to that branch of historical geography which seeks to assess the nature of the relationship existing between man and his environment at some particular place and in some particular time in the past, and that its specific concern is to evaluate the roles of environmental and human factors in influencing the spread of white settlement from the Cumberland Plain into the coastal and upland areas lying beyond the sandstone plateau encircling the plain. The preceding chapters have described the major features of the environment of the Nineteen Counties and considered, in varying degrees of detail, the history of their occupation and development up to 1829. Before proceeding to draw some general conclusions about the spread of settlement in New South Wales during the period 1788 to 1829, it will be well to summarise briefly some of the
Chapter 9.

more important features of the geography and history of settlement in the Nineteen Counties.

The most important feature of the physical geography is the sandstone plateau which completely surrounds the Cumberland Plain. Because of its steep scarps and deep dissection this plateau made communication between the Cumberland Plain and the districts fringing the plateau rather difficult; while its sandy soils, scrub and forest-with-scrub vegetation, and lack of surface water made it a most unattractive area to settlers and a tract to be traversed as speedily as might be by travellers. On the Cumberland Plain, in the Hunter Valley, in the upland district west of the Blue Mountains, in the Southern Tableland, and on the Illawarra and Shoalhaven Plains, soils ranging from light sands and gravels through loams and silts to heavy clays each carried a characteristic vegetation association in which trees and grasses were the dominant plant forms either as grasslands or savannah woodlands. In particularly moist or sheltered situations on the coast a sub-tropical rain-forest was found, but for the most part all these districts presented, except for the
Chapter 9.

grassy "plains", a parklike appearance: the trees were more or less widely spaced and the areas between covered with grass. Their relief is subdued and their horizons wide: there was no impediment to easy travel through them. These were consequently the areas most attractive to settlers who considered the alluvial soils, notwithstanding their occasional inundation, the most satisfactory ones for agriculture, and the open, grassy plains and woodlands to be ideally suited for the raising of cattle and sheep.

But apart from the stable and enduring features of topography, soil and vegetation, there were others whose nature was variable and ephemeral. One of these, of course, was climatic: the variation of the rainfall from year to year so that in one crops might be lost through the flooding of the low-lying farm-lands and in another by the failure of seed to germinate in the parched soil. The pastoralists and graziers were less affected by the caprice of rainfall than the farmers. They could often move their sheep and cattle to higher and safer ground in times of flood, or to new pastures when the old were dried, eaten out, or bereft of water.
Chapter 9.

But when drought was general throughout the colony they too suffered the distress of a diminished or vanished income. The other variable element was "the caterpillar" whose appearances were sporadic and usually disastrous. The swarms of caterpillars might emerge in a good season or a bad one, in spring or late summer, twice in a year or not at all. To both agriculturalist and stockkeeper the caterpillars brought ruin as they advanced across the country, eating both growing crops and native grasses and leaving the ground bare behind them. This then was the environment: on the one hand comparatively rich soils (by Australian standards) and fine natural pastures, on the other, flood, drought and plague.

The elements in the human situation were as various and variable as those of the environment. The settlers included in their number unskilled ex-convict farmers who were agriculturalists rather than graziers and who were at the mercy of the colony's wildly fluctuating grain market, and free immigrants, pastoral as well as agricultural, possessing every advantage in land, capital, knowledge and influence. In the earliest days
labour was short and settlers were hard pressed to find enough men to clear, hoe, plant and harvest; but in the years immediately after 1815 it was super-abundant and Governor Macquarie was having difficulty in finding useful employment for the colony's convict population. Yet in the 'twenties again, labourers were so scarce that settlers were pleased to have a London pickpocket who knew nothing of sheep as a shepherd, or a man who had lived as a child with a carpenter but had not followed the craft as a "mechanic" to help build houses.

Land settlement policy was almost unformed. Certainly there was no over-all plan for the extension of the colony and the Governors met the exigencies of each situation with ad hoc decisions and measures designed in the light of expediency rather than policy. Governor Phillip recognised the potential of the alluvial terraces of the Hawkesbury but could not settle them because of his limited resources. After the alluvial areas in Cumberland had been settled, King looked to the Hunter Valley and Shoalhaven as possible sites for new settlement, but after he had been recalled, and especially during the post-Bligh interregnum, expediency
Chapter 9.

ruled once more and the clayey forest lands of the Cumberland Plain were settled in preference to more distant alluvial lands. Later, Macquarie was able to restrict the settlement of the newly discovered Bathurst and Argyle districts until the position of the graziers became desperate as a result of drought and plague, and then he was able to direct the greater part of the outward movement from Cumberland south-westward into the Southern Tablelend. Brisbane, faced with the problem of making land available quickly, instituted the Ticket-of-Occupation, and later to facilitate the administration of land settlement, Darling placed limits on the area into which settlers might move. But even these limits were not immutable and were modified in 1829 when the Nineteen Counties came into being, and again when the final boundaries of the counties were proclaimed during the 1830s.

In this reaction between man and his environment in New South Wales there were thus many varying influences at work, and this study has endeavoured to trace the circumstances in which their relative importance changed from time to time and from place to place.
Some areas, because of their soil or natural vegetation, were particularly attractive to settlement, but their occupation depended as much on a governor's decision as on their suitability for grazing or agriculture. Thus at the end of Macquarie's administration several settlers who would have liked to have taken their stock to Sutton Forest were given permission to go to Bathurst, and later when many would have preferred to cross the Blue Mountains and occupy land near Bathurst, they were directed to the "New Country" of the south-west. The pattern of settlement was influenced on the one hand by the character of the country and on the other by governmental direction, and the important events in the spread of settlement were sometimes the result of the one, at others the result of the other.

The first major change in the settlement pattern was motivated almost entirely by environmental factors; in the second, social or demographic factors came into play. The former was the abandonment of the farm-land at Sydney and the occupation of the small patches of alluvium and better clay soils near Parramatta, a change enforced by the sterility of the thin sandy soils
Chapter 9.

derived from the Hawkesbury Sandstone. The second change, the occupation of the Hawkesbury terraces, resulted from the almost complete occupation of the more attractive areas at Parramatta, and from the growth of the colony's population to a size which would allow the settlement of a remote area. The third change, the occupation of the forest-lands, was induced by the great variability of the climate: the flooding of the alluvial crop-lands made the settlement's food supply so erratic that it could not be depended upon and prudence demanded the settlement of areas that were not subject to inundation.

During Governor Macquarie's term of office human and physical factors combined to make the settlement of one or more areas outside Cumberland necessary. On the human side, the colony's population was growing rapidly, both as the result of the larger numbers of convicts being transported and because of the commencement of free immigration; the greater part of the Cumberland Plain had already been granted or reserved; and Macquarie believed that the occupation of a new area would provide both employment for a greater number of
Chapter 9.

convicts and land for new settlers. Some of the physical factors were less obvious than others. The slow exhaustion of the Cumberland soils by cropping and the deterioration of the natural pastures as a result of grazing were not nearly as spectacular as the sudden devastation resulting from a plague of caterpillars or the rapid drying of the rivers and creeks in time of drought, but these four physical considerations were all reasons for seeking new lands - and they were all "environmental" influences.

The physical environment was thus not an entirely static entity: it was capable of changes of far reaching importance. To adapt the stage metaphor: while the stage upon which the play was enacted remained the same, the "set" altered and the changes in the set - in the rather minor features of the stage - introduced new acts in the drama. Thus while the Cumberland Plain remained essentially the same lowland area of clayey soils and woodland vegetation, there were from time to time changes in its potentialities: the soils became desiccated or inundated, the amount of grass varied from season to season according to the amount of the rainfall
Chapter 9.

and the emergence or absence of caterpillars. In the history of the spread of settlement in New South Wales, the dynamic, as opposed to the static, environmental features played an important part in the timing of the outward movement of settlement. Events which led to a sudden limiting of the environmental possibilities (that is, drought and plague) determined the time of the great outward movement. But Governor Macquarie determined its south-westerly direction. Later, the removal of the Newcastle penal settlement and Brisbane's lifting of Macquarie's restrictions on the settlement of the Bathurst district made all the areas fringing the sandstone plateau available for settlement. At that stage, the more static elements of the physical environment again became more important. The suitability of the Hunter Valley for agricultural development, of the Bathurst district for sheep raising and of the south-western districts for cattle grazing influenced the settler's choice of his location. So did the facility of transportation and availability of markets. But within these areas the distribution of settlement in detail was environmentally influenced. The areas occupied were the alluvial soils, or the natural
Chapter 9.
grasslands and woodlands: the forests were left. Thus settlement became widely scattered as stations were placed in remote areas of granitic, shale, limestone or lacustrine soils. On the other hand, governmental expediency required restriction of the rapid expansion of the area being occupied, and the 1826 "limits of location" were established. The limit which was placed on the spread of settlement was thus an entirely human one.

However, in each of the remote areas, the character of settlement was not determined by purely physical factors. Certainly in its soils, climate and facility of communication with Sydney, the Hunter River Valley possessed all the requirements of an agricultural area, but its development as one was not simply a matter of physical suitability. The fact that it was occupied by settlers who were for the most part free immigrants with means and ability, was a human factor of considerable importance. Similarly, the development of the western uplands as a pastoral district depended as much on the fact that Macquarie made it available in the first place to "respectable" settlers as on the fineness of its grass or the lightness of its soils - the "respectable"
settlers were those who could afford to breed a flock of sheep. Again, the emphasis on cattle in the south-west is partly explained by the fact that this district was made available to anyone irrespective of their "respectability" and so was occupied by the "lower orders" of colonial society who kept cattle rather than sheep.

But possibly the most vital of the human factors involved in the spread of settlement in New South Wales was the character of one man - Governor Macquarie. It would be foolish not to recognise that many extremely important elements in the evolution of settlement were completely independent of him and were not influenced by him: for instance, to cite from both sides of the physical-human equation, the fluctuation in climate and the growth in population resulting from increased transportation were both entirely uninfluenced by him. But he did, nevertheless, have a profound effect on the general course of the spread of settlement. At the commencement of his administration the colony occupied but a portion of the Cumberland Plain and its horizon was circumscribed by the encircling sandstone. When he left New South
Chapter 9.

Wales, Cumberland was the centre from which settlement was spreading out into the newly discovered lands of the west and south-west. His reservation of some areas and opening of others, resulted in part from his optimism and high idealism (for example, his reservation of the Bathurst district for a carefully regulated settlement) and in part from his opinion, informed or uninformed, of the worth of the country. He certainly appears to have been over-enthusiastic in his evaluation of many areas: phrases like "admirably adapted to the purposes of both agriculture and grazing" occur with almost monotonous regularity in his journals. Such enthusiasm might have led to the establishment of useless settlements but for the fact that one of his advisers, John Oxley, was far more astute in assessing the value of the land he saw. Oxley, a seafarer turned surveyor, was probably, after Macquarie, the most important single personality influencing the progress of land settlement. Macquarie's enthusiasm for a settlement at Jervis Bay and Oxley's report on its suitability are instances to point the relative roles of these two.

All in all, the general conclusion to be reached may seem at first sight little more than a
Chapter 9.

truism: that in the spread of settlement in the original Nineteen Counties of New South Wales, both physical and human factors worked with varying importance from time to time and from place to place, that the opportunities offered by the country were on occasions neglected because of the expediency of the human situation, and that on other occasions a sudden calamity like drought or caterpillar plague enforced a change in government policy which in turn allowed advantage to be taken of the land's potential.

These are conclusions in matters of fact. In matters of method, there are other conclusions to be drawn: that there was considerable regional variation in the processes of settlement in New South Wales and so any general conclusion about the colony as a whole must be based on a study of its regions and of the individual situation peculiar to each: that because of the interaction of environmental and human factors, a wide study must be made of both the physical and historical facts in order to determine the relative importance of each and which particular one of a group of factors was most responsible for the situation at a given place and time.
Chapter 9.

In other words, that the historical geographer in attempting to make an assessment of the relation between man and land in past time, must cast his net wide and be sure that the historical events as well as the geographical setting are given adequate consideration: that he must include in his study "a due proportion of history" which, though "subservient to the general design", is nevertheless "a collateral part" of his study. On the whole, then, the general conclusion stated at the beginning of the preceding paragraph may be more revealing than is at first apparent: the over-all picture of Australian settlement history is as a rule presented in too general and simple terms, giving the impression of an all but completely homogeneous society. It is hoped that this study of a limited area and period, showing that there was much regional differentiation within the colony, and that its society was not as homogeneous as is often implied, may lead to a modification of the generally accepted view of the settlement of Australia, or at least to a detailed consideration of the geographical and historical circumstances of the settlement of particular regions at particular time in order to ascertain to what extent they possessed a unique regional character.
Chapter 9.

arising from their peculiar physical resources and settlement history.
Plate 1.

COASTAL PLAIN: THE HUNTER RIVER VALLEY

The valley of the Hunter River in the Carboniferous a little above the junction of the Hunter and Rouchel Brook.

Note the fairly wide valley floor, the steep slopes of the surrounding hills and the short-trunked, freely branching trees typical of the woodlands. The land in the foreground has been partly cleared.
Plate 2.

COASTAL PLAIN: THE HUNTER RIVER VALLEY

Part of the Upper Coal Measures country between Muswellbrook and Jerry's Plains looking southward across the Hunter River (which is not visible) to the northern scarp of the Hawkesbury Sandstone Plateau. The trees in this area are eucalypts, casuarinas and kurrajongs.
Plate 3.

COASTAL PLAIN: THE HUNTER RIVER VALLEY

The wide, lower valley of Fal Brook near Glennie's Creek looking across wide alluvial flats to the more rugged Carboniferous country to the north-east.
Plate 4.

COASTAL PLAIN: ILLAWARRA

The northern end of the Illawarra Plain seen from the edge of the sandstone plateau. Note the steep scarp in the left foreground, the thickly forested slopes and the succession of headlands and beaches along the coast.
Plate 5.

HIGHLANDS: THE BLUE MOUNTAIN PLATEAU

The Grose Valley in the Hawkesbury Sandstone plateau looking north-east from Govett's Leap lookout, Blackheath. Note the cliffs of the Hawkesbury Sandstone, the steep slopes beneath, and the rounded tops of the basaltic extrusions, Mt Tomah and Mt Hay, on either side of the valley in the middle distance.
Plate 6.

HIGHLANDS: THE SANDSTONE PLATEAU

The Shoalhaven Gorge in the sandstone highlands near Tallong. Note the level skyline of the plateau, the sandstone cornices and the steep slopes of the Ordovician rocks below.
Plate 7.

HIGHLANDS: THE GEORGIANA HIGHLANDS

A view south-westward across the country drained by the Abercrombie River and Tuena Creek.
Plate 8.

HIGHLANDS: THE ROXBURGH HIGHLANDS

A view across the valley of Cunningham's Creek, a tributary of the Turon River, from the road between Sally's Flat and Sofala near Monkey Hill.
Plate 9.

HIGHLANDS: THE PERMIAN "SHELF"

Portion of the wide, flat "shelf" near Rylstone, looking from the edge of the plateau towards the Roxburgh Highlands. This area originally carried a fairly close woodland vegetation parts of which remain and can be seen in the middle distance. The trees are eucalypts and kurrajongs.
Plate 10.

HIGHLANDS: THE PERMIAN "SHELF"

The valley of the Cox River seen from Mt York. Note the cliff and steep slope of the plateau at the left, the undulating valley floor, and the Georgiana Highlands in the distance.
Plate 11.

UPLANDS: THE BATHURST PLAINS

A view from Mt Pleasant near Bathurst across the Bathurst Plains to the western scarp of the sandstone plateau. The trees on the slopes in the foreground are eucalypts, but those in the undulating country in the middle distance are introduced exotics. The Macquarie River occupies the depression beyond the cloud shadow in the centre of the picture.
Plate 12.

UPLANDS: THE WESTERN UPLANDS

Part of the more strongly rolling country of the ridge between Bathurst and Orange. Note the freely-branching woodland type tree in the foreground.
Plate 13.

UPLANDS: THE SOUTHERN TABLELAND

The wide, shallow valley of the Yass River near Gundaroo.
Plate 14.

UPLANDS: THE SOUTHERN TABLELAND

Gently undulating country in the Yass-Rye Park district.
A view southward across the Gundary Plain, the original Goulburn Plains. Note the shallow course of Gundary Creek, the low hills surrounding the plain and the absence of trees. Almost all the trees shown in the photograph are exotics (pines, willows and poplars).
Plate 16.

**UPLANDS: THE SOUTHERN TABLELAND**

A view across the Monaro Corridor towards the Tidbinbilla Range. The Murrumbidgee River is entrenched in this depression at the foot of the first ridge beyond which the snow-capped peaks of the Tidbinbilla Range can be seen.
Plate 17.

MIXED EUCALYPT FOREST

This plate shows a section of the mixed eucalypt forest which is typical of the sandstone country. It includes both Eucalypts and Angophoras and a wide variety of shrubs. The staff is marked in feet.
Plate 18.

OPEN FOREST COUNTRY

Portion of the type of vegetation which is transitional between the forest and woodland in the Breakfast Creek district. The trees are Eucalypts and Callitris, and both shrubs and grasses are found in the under storey.
EUCALYPT WOODLAND

Portion of the fairly close woodland found on the slopes of Black Mountain, Canberra. Note the rather twisted, freely branching eucalypts (E. rossii) and the clumpy grasses.
Plate 20.

SCRUBLAND

The type of stunted scrub found on the less attractive parts of the Hewkesbury Sandstone, in this case on the fringe of French's Forest to the north-west of Manly. Note the stunted mallee-like habit of the Eucalypts and the variety of shrubs which include Hakeas, Xanthorrhoeas, Banksias and Melaleucas. The staff is marked in feet.
Appendix 1.

A NOTE ON THE DIVISION OF NEW SOUTH WALES INTO COUNTIES

(See Chapter 1)

The first order requiring the governor of New South Wales to divide the territory under his jurisdiction into counties was received in the colony in 1825, but by that time a number of counties had already been established. The first county, Cumberland, had been formed by Governor Phillip in 1788 within a few weeks of the formal establishment of the colony. In a despatch he reported:

"... as it is necessary in Public Acts to name the County, I named it Cumberland, and fixed its boundaries by Carmarthen and Landsdowne Hills to the westward (i.e. the Blue Mountains), by the northern parts of Broken Bay to the northward, and by the southernmost parts of Botany Bay to the southward."¹

Similarly, when Governor King in 1804 placed a new settlement at the mouth of the Hunter River his order stated that it was:

"... to be distinguished by the name of Newcastle, in the county of Northumberland, the division between which and the county of Cumberland is to be the parallel line of 33° 20' south latitude."²

It should be noted that this order altered the northern boundary of Cumberland.

As new areas were occupied, new counties came into being: Westmoreland which comprised the country west of the Blue Mountains; and Camden lying to the south and south-west of Cumberland in 1819;³ and Argyle beyond Camden to the south-west in 1821.⁴ The formation of these counties had little real significance. Some magistrates were

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4. G.G.O. 3 March 1821. This order besides establishing Argyle revised the boundaries of Camden.
Appendix 1.

sworn as magistrates within a named county, but many were "magistrates of the Territory" whose powers extended throughout the colony. Even as district names they were little used: in the Colonial Secretary's correspondence the name "Westmoreland" is rarely encountered, "Bathurst" or "Bathurst district" being the terms commonly applied to the country on the far side of the Blue Mountains; and Argyle was used indiscriminately to apply to the whole of the country to the south-west of the Nepean.

In his third report, Commissioner Bigge suggested that

"to facilitate the location of land to settlers ... the country intended to be settled should be previously surveyed and laid out in districts, sub-divided into farms of such sizes as are usually granted; and that with reference to the locality of the country, and its natural boundaries, each district should not contain more than thirty-six square miles."

This recommendation probably influenced Earl Bathurst's decision to have the country divided into counties, hundreds and parishes. The direction to have such a partition of the territory made was included in his despatch to Governor Brisbane dated 1st January 1825. Counties were to be "as nearly as may be 40 miles square" and were to be apportioned into hundreds and parishes of 100 and 25 square miles respectively. In delineating the boundaries of counties the Commissioners who were to be appointed to supervise the survey and subdivision of the country were required:

"... to have regard to all the great natural divisions of the territory, which may be formed by rivers, Streams, High lands or otherwise, preferring in all cases a clear and well defined boundary line even at the sacrifice of regularity in the dimensions of a County, Hundred or Parish...."

But in 1825 the survey of the colony had not proceeded sufficiently for such boundaries to be fixed and it was not until 1829 that part of the colony could be provisionally divided into counties.

5. J.T. Bigge, Report on Agriculture and Trade ... (1823), p. 49.
Appendix 1.

In 1826, as part of the new regulations for the granting and sale of land, limits had been set beyond which settlers would not be allowed to select land and in 1829, as a result of the greater knowledge of the colony available from the surveys then in progress, it became possible to revise these limits and define them more carefully. (The circumstances leading to the proclamation of these limits in 1826 are discussed in Chapters 3 and 4.) The Government Order of 14th October 1829, which revised the limits of area available for settlement, was in two parts: the first redescribed the boundaries and the second partitioned the area within them into nineteen provisional counties. These counties, like so many acts of colonial land administration, were begotten in expediency: the survey of the colony had not yet reached the stage of allowing a division based on "the great natural divisions of the territory", but some subdivision of it was desirable and enough was known of its physical features for provisional boundaries to be determined. The order made it quite clear that these were not the counties which would later come into being in compliance with the direction from England:

"It is to be understood, however, that the present Notification is not intended as the Publication directed by HIS MAJESTY'S Instructions, and necessary to the legal Erection of Counties, the Arrangements not being sufficiently advanced for that Purpose. But it has more particularly in view the Convenience which it will afford to Settlers in describing their Selections, and to the Commissioners and Surveyor General's Department in apportioning the Territory...."

The nineteen counties described in this order were: Cumberland, Camden, St Vincent, Northumberland, Gloucester, Durham, Hunter, Cook, Westmoreland, Argyle, Murray, King, Georgiana, Bathurst, Roxburgh, Phillip, Brisbane, Bligh and Wellington. Five of these (Cumberland, Camden, Northumberland, Westmoreland and Argyle) had already been established, and maps produced prior to 1829 show two others, Durham and Roxburgh. Durham lay to the north of the Hunter River and Roxburgh apparently extended from the west of the upper Hunter River (i.e. the portion above the Goulburn junction) to the Macquarie River.

7. G.O. 14 October 1829.

8. See Danger's Map of the River Hunter... (Cross, London, 1828) and Stewart's Plan of the Lands located at Bathurst 1824 (M.L. F15/1.)
Appendix 1.

By 1834 the survey of the colony, or rather of these nineteen counties, had proceeded sufficiently for the county boundaries to be fixed and these were submitted for the approval of the Colonial Office in a despatch from Governor Bourke dated the 5th May. Bourke pointed out that some of the counties were slightly larger than the ideal size recommended in the instruction for the erection of counties but explained that this was considered desirable as it allowed the counties to be enclosed by distinctive natural boundaries. In particular the counties of St Vincent and Gloucester exceeded the ideal size. The Duke of Wellington approved the proposed divisions but suggested that the Surveyor-General consider modifying the boundaries of St Vincent and Gloucester if that could be done without abandoning natural boundary lines. He also authorised the Governor to publish Letters Patent establishing the sub-division of the territory. In May 1835, a Proclamation publishing the Letters Patent erecting the County of Cumberland and dividing it into hundreds and parishes was issued and in November a further Proclamation published the Letters Patent erecting the counties of Camden, St Vincent, Northumberland, Durham, Hunter, Cook, Westmoreland, Argyle, Murray, King, Georgiana, Bathurst, Roxburgh, Phillip, Brisbane, Bligh and Wellington. The nineteenth county, Gloucester, was not formally erected until some years later, the delay being caused by the revision of its boundaries. Except in Map 8 the boundaries of the counties shown on maps in this thesis are the present ones which were established by the 1835 proclamations and not the provisional boundaries set in 1829.


Appendix 2.

PHYSIOGRAPHIC REGIONS

(See Chapter 1 and Map 4)

Before a really satisfactory attempt can be made to distinguish physiographic units within any large region one essential is an accurate, large-scale, topographic map. As this is not available for the whole of the area of the Nineteen Counties it is all the more necessary to describe the method by which the regions on Map 4 were defined.

In classifying regions two major considerations operated. First that the primary division should be based in the four physiographic provinces which are traditionally recognised in New South Wales: coastal plains, highlands, western slopes, and western plains. Second, that as the purpose in making the divisions was not so much a matter of distinguishing precise morphological units as facilitating the description of the area, the number of regions within each province should be as small as possible without including markedly disparate areas within the one region.

In defining the boundaries of the regions, four sources of information were used:

i. Inch-to-the-mile topographic maps which are available for about half the area of the nineteen counties - principally the coastal and central parts. Most of these are contoured at a vertical interval of fifty feet (See Map 17). (The whole area is covered by the sheets of the four miles per inch map, but as these are contoured at a vertical interval of 300 feet and are notoriously inaccurate they are of little use.)

ii. Geological maps - principally the three published sheets of the Four-mile geological series (Sydney, Wollongong, and Canberra), and the geological maps published with the Preliminary Surveys of Resources of the regions of N.S.W. made by the Division of Reconstruction and Development of the Premier's Department. The geological maps published with papers in the proceedings of the N.S.W. Royal Society and of the N.S.W. Linnean Society, were also useful. (See Bibliography.)
Appendix 2.

iii. The maps of "Generalized Topography" published with the regional reports of the Division of Reconstruction and Development referred to above. These maps distinguish four topographic types:

a. Mostly flat (not more than 3 degrees slope).
b. Undulating to hilly (more than 3 degrees and not more than 8 degrees slope).
c. Hilly to steep (more than 8 degrees and not more than 15 degrees slope).
d. Rugged or mountainous (includes all land over 15 degrees slope).

(One wonders how, in face of the want of topographic surveys, these maps were compiled.)

iv. A reconnaissance field survey which traversed the whole area - the settled districts in rather more detail than the unsettled highland regions, however.

The map with its four major provinces and twenty-six regions is considered to be reasonably accurate and satisfactory enough for its purpose. The plain regions are entities sufficiently distinct to need no comment, but the highland and upland provinces require some explanation. In the main, elevation and a high degree of youthful dissection involving deep canyons and expanses of almost flat plateau surface are the chief characteristics of the highland province which has been divided into regions differentiated on the whole on a primarily lithological basis. (It should be noted, however, that the boundaries of the "Shelf Area (H4A) are shown approximately, the long strip on the map indicating the area within which "shelves" are to be found rather than their actual extent.) The "Upland" province is characterised by elevation, low relative relief, and mature dissection. In many places the position of the line between the highlands and the uplands could be debated (this is especially true of the part between the Wollondilly and Lachlan Rivers) but it is considered that on the whole it marks the approximate position of the change from the rolling, wide-horizoned uplands to the more rugged, narrow-valleyed highlands. The name "uplands" has been used in preference to "western slopes" as it is felt that the latter name suggests that this area is merely the western foot-hill zone of the highlands, whereas it is much more complex than that: part of it drains to the east, and part of it is a basin of interior drainage. It is a separate province which is not just a simple transition zone between the highlands and the plains to the west. Only one real region has been distinguished within the upland province - the area of lakes and lake-beds surrounding Lake George. This is the most distinct unit of any magnitude within the province and for that reason has been distinguished from the remainder.
Appendix 2.

of the province. While other regions could have been recognised it was felt that most would have been of such small extent (e.g. the Limestone Plains, Yass Plains, and Macquarie Plains) that their recognition would have led to a proliferation of small regions of little real significance in the present study, and which if distinguished would require a further sub-division of the highland regions in the interests of uniformity of method.

While it is not claimed that these regions should be regarded as anything more than a convenient division of the country to simplify its description in this thesis, it is nevertheless appropriate to give some indication of the magnitude of the units used in terms of one of the recognised systems of morphological analysis. The larger units, provinces, correspond approximately with the provinces in D. L. Linton's system, and the smaller units, regions, are roughly equivalent to his tracts. Linton recognises an intermediate division between these two, the section, which, because of the relative smallness of the area involved in the present study, was not recognised. (The popularly accepted division of the N.S.W. highlands into four parts - New England, Blue Mountains, Southern Highlands and Monaro - is a recognition of units of about the same magnitude as sections.)

Appendix 3.

THE EXPLORATION OF CUMBERLAND

(See Chapter 2)

This Appendix lists in chronological order the most important journeys of exploration in the Cumberland Plain. After a brief description of the route followed a list of major sources of information on each journey is given. Except where they are of special importance, secondary sources are not listed. The full titles of the books given short titles here will be found in the Bibliography.

The most important of the secondary sources on the exploration of this area is Professor G.A. Wood's "Explorations under Governor Phillip" in R.A.H.S.J. Vol. xii (1926), p. 1 ff. This paper is followed by a valuable set of notes and a map by J.F. Campbell.

1788 January

ARTHUR PHILLIP: from Botany Bay by boat to examine Port Jackson for a possible site for the new settlement.

Phillip - Sydney, 15 May 1788 (H.R.A., I, i, 17-18)
Voyage of Governor Phillip, pp. 47-51.
Tench, Narrative, pp. 48-9.

1788 February

JOHN HUNTER: survey of Port Jackson.


1788 March

ARTHUR PHILLIP: examination of the lower part of Broken Bay and Pitt Water by boat.

Voyage of Governor Phillip, pp. 76-85.
Appendix 3.

1788 April

ARTHUR PHILLIP: from Manly northwards along the coast to Dee Why Lagoon, up Greendale Creek and across the southern part of French's Forest to Middle Harbour; along Middle Harbour to where it became fresh and westward to the vicinity of Pennant Hills. Returned to Sydney via Middle Harbour and by boat.

Phillip - Sydney, 15 May 1788 (H.R.A., I, i, 29).
Voyage of Governor Phillip, pp. 97-9.

1788 April

ARTHUR PHILLIP: westwards along the harbour to Rose Hill (later Parramatta) and beyond as far as Belle Vue (Prospect Hill?).

Tench, Narrative, pp. 104-6.

1788 June

ARTHUR PHILLIP: overland from Rushcutter's Bay to the French grave on the northern headland of Botany Bay.

Voyage of Governor Phillip, pp. 112-16.

1788 August

ARTHUR PHILLIP: overland along the coast from Manly to Pitt Water.

Voyage of Governor Phillip, p. 133.

1788 December

ARTHUR PHILLIP: examination of Botany Bay by boat.

Phillip - Sydney, 13 February 1790 (H.R.A., I, i, 155).
Appendix 3.

1789 June

ARTHUR PHILLIP: examination of Broken Bay by boat and discovery of Hawkesbury River.

Tench, Complete Account, pp. 25-6.

1789 June

ARTHUR PHILLIP: exploration of Hawkesbury River by boat from Broken Bay as far upstream as Richmond Hill.

Phillip - Sydney, 13 February 1790 (H.R.A., I, i, 155-6).

1789 June

WATKIN TENCH: westward from Parramatta to discover the Tench (later Nepean) River.

Phillip - Sydney, 13 February 1790 (H.R.A., I, i, 156-7; also Note 126, p. 746).
Tench, Complete Account, pp. 27-29.

1789 December

WILLIAM DAWES: westward from Prospect Hill to the Nepean River and thence to Mt. Twiss. An attempt to cross the Blue Mountains.

(The sources are listed in Appendix 5.

1790 August

WATKIN TENCH: exploration of the country south and west of Parramatta (apparently in the Camden-Mt. Annan area).

Tench, Complete Account, pp. 52-53.
Appendix 3.

1790 August

WATKIN TENCH & WILLIAM DAWES: exploration north-westwards from Parramatta to the Hawkesbury River near Richmond Hill (which was unrecognised) and along the river upstream to the place where the Nepean was originally discovered.

Tench, Complete Account, p. 53.

1791 April

ARTHUR PHILLIP, WATKIN TENCH, WILLIAM DAWES and others: from Parramatta to the Hawkesbury which they followed downstream to Cattai Creek (?), up Cattai Creek, returned to the Hawkesbury and followed it upstream to South Creek, along the eastern bank of South Creek, and thence to Parramatta.

Tench, Complete Account, pp. 112-127.  

1791 May

WATKIN TENCH & WILLIAM DAWES: from Parramatta to the Hawkesbury via the west bank of South Creek, thence to Richmond Hill and a short distance beyond it to the north-west. Confirmed that the Nepean and Hawkesbury Rivers were in fact a single stream.

Tench, Complete Account, p. 127.  

1794 May

A SMALL PARTY (names unknown): attempt to find a freshwater river flowing into the sea to the south of Botany Bay but were unsuccessful.


1795 October

GEORGE BASS & MATTHEW FLINDERS: explore Botany Bay and George's River in the "Tom Thumb".

1795 November

HENRY HACKING, GOVERNOR HUNTER and others: following the discovery of the wild cattle on the Cow Pastures by a shooting party from Parramatta, Hacking visited the area to confirm the discovery and later Governor Hunter with a party visited the Cow Pastures to see the herds of cattle.


1796 March

GEORGE BASS & MATTHEW FLINDERS: to Lake Illawarra, Wattamowla & Port Hacking in the second "Tom Thumb".

Flinders, Voyage, Vol. i, pp. xcvi-cciiii.
Flinders, Voyage to Canoe Rivulet (Public Library of Victoria).

1796 June

GOVERNOR HUNTER: visited Mt Hunter and the Cow Pastures.

Collins, Account, Vol. i, p. 484.

1797 August

GEORGE BASS: examined coal strata at Coal Cliff in a whaleboat.

Bass - Paterson, 20 August 1797 (H.R.N.S.W., Vol. iii, p. 289).

1797 September

GEORGE BASS: journey from Mt Taurus in the Cow Pastures to the coast south of Port Hacking.

Appendix 4.

THE SETTLEMENT OF THE FOREST-LANDS

(See Chapter 2)

Although the Cumberland Plain consists essentially of soils derived from the Wianamatta shales, its northern portion includes extensive areas of alluvial soils. While both Paterson and Macquarie settled the clay-lands of the northern districts at the same time as those of the southern parts of plain, the presence of many small farms on the alluvial soils of the north makes it difficult to assess from the statistics of those districts the nature of settlement on the clay soils. In this discussion of the settlement of the forest-lands, the southern districts of Airds, Appin, Bringelly, Cabramatta, Cook, Minto and Upper Minto will be taken to be typical of the clay-lands of the Plain.

Table A shows the sizes of grants given by Paterson and by Macquarie in both the earlier and later parts of his administration, and Table B the distribution of these grants by districts. The most important points emerging from these tables are:

i. That a very small proportion of the grants given were for areas of less than 100 acres. Most of these were given by Macquarie during the first years of his governorship and the greater number of them were in the districts of Airds, Bringelly, Cook and Upper Minto - the districts fronting the Nepean river and including the strip of alluvial soils flanking the river. Presumably these grants were all on, or included a large proportion of, the alluvium.

ii. That after 1812 Macquarie gave no grants of land in these districts of less than 100 acres. By 1812 the alluvial soils would have been settled and we must assume that Macquarie, recognising that small farmers would not be able to use the clay soils profitably, did not settle any more of them in these districts.

iii. That the majority of the grants given by both Paterson and Macquarie were for areas of between 100 and 1,000 acres, such grants amounting to about two-thirds of the total number given. About half of these (i.e. about one-third of the total) were for areas of between 100 and 300 acres.
Appendix 4.

iv. That the number of very large grants (more than 1,000 acres) was relatively small.

These figures suggest that the forest-lands were settled by farmers placed on moderately sized farms, but this is not altogether true. Many settlers were able to obtain more than one grant of land and so the number of large farms was greater than the figures show. William Broughton, for instance, received grants of 1,000 and 700 acres; Charles Throsby grants of 950 and 550 acres; Simeon Lord held 896 acres in Minto and Cabramatta under four grants in addition to some 1,800 acres in other districts; Rowland Hassall held three grants totalling 1,070 acres; Nicholas Bayley owned 2,350 acres given in five grants; and Alexander Riley 5,500 acres in four grants.

Prior to 1824 and 1825 it is not possible to assess the proportion of land in the forest-land districts cultivated or cleared as these districts were included with the alluvial soils of George's River in the Liverpool Muster District. But in 1825, the proportion of the land held in these districts which was both cleared and cultivated was comparable with that in all the Cumberland districts except those with an exceptionally high proportion of alluvial soils (e.g. Windsor and Wilberforce). See Table C. Airds had a higher proportion of cultivated land than the other forest districts because of the larger number of small farmers it included, and because several of the more outstanding of the stock-and-crop farmers (e.g. John Oxley, William Howe, George Molle, Robert Townson and William Campbell) possessed land there.
### Table A: Size of Land Grants given in the Forest-land Districts by Lieutenant-Governor Paterson and Governor Macquarie

<table>
<thead>
<tr>
<th>Number of grants given by Lieutenant-Governor Paterson.</th>
<th>1-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-299</th>
<th>300-399</th>
<th>400-499</th>
<th>500-999</th>
<th>1000-2000+</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>6</td>
<td>24</td>
<td>14</td>
<td>7</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>65</td>
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</table>

<table>
<thead>
<tr>
<th>Number of grants given by Governor Macquarie, 1810-1812.</th>
<th>1-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-299</th>
<th>300-399</th>
<th>400-499</th>
<th>500-999</th>
<th>1000-2000+</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28</td>
<td>23</td>
<td>8</td>
<td>7</td>
<td>-</td>
<td>4</td>
<td>16</td>
<td>9</td>
<td>95</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of grants given by Governor Macquarie, 1812-1821.</th>
<th>1-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-299</th>
<th>300-399</th>
<th>400-499</th>
<th>500-999</th>
<th>1000-2000+</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>17</td>
<td>29</td>
<td>9</td>
<td>11</td>
<td>38</td>
<td>13</td>
<td>125</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL NUMBER OF GRANTS</th>
<th>1-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-299</th>
<th>300-399</th>
<th>400-499</th>
<th>500-999</th>
<th>1000-2000+</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30</td>
<td>29</td>
<td>49</td>
<td>50</td>
<td>16</td>
<td>17</td>
<td>60</td>
<td>26</td>
<td>285</td>
</tr>
</tbody>
</table>

Compiled from the returns of lands granted in H.R.A. I, vii, 318, 436-9, 440 and 652-4; and H.R.A. I, x, 560-66. Note that some grants in the return on pages 652-4 of Vol. vii are also included in the return in Vol. x.
## Background

### Table B: Size of Land Grants given in the Forest-land Districts by Lieutenant-Governor Paterson and Governor Macquarie (By Districts)

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>SIZE OF GRANT (ACRES)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-49 50-99 100-199 200-299 300-399 400-499 500-999 1000- 2000+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airds</td>
<td>12 8 10 8 2 1 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appin</td>
<td>- 1 2 1 - 1 4 2 -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bringelly</td>
<td>2 4 6 15 5 5 21 8 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabramatta</td>
<td>- 1 9 5 4 4 11 2 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cook</td>
<td>7 2 5 7 2 2 10 9 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minto</td>
<td>1 4 12 12 3 3 6 3 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Minto</td>
<td>8 9 5 2 - 1 5 - -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>30 29 49 50 16 17 60 26 8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Compiled from the same sources as Table A.
### Table C : Area of Land Cultivated, Cleared and Held in Cumberland, 1825.

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>Cultivated</th>
<th>Cleared</th>
<th>Held</th>
<th>Cult. per 100 acre held</th>
<th>Cleared per 100 acre held</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREST-LAND DISTRICTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airds</td>
<td>4,991</td>
<td>8,428</td>
<td>21,844</td>
<td>22.8</td>
<td>38.5</td>
</tr>
<tr>
<td>Appin &amp; Illawarra</td>
<td>1,837</td>
<td>3,258</td>
<td>29,909</td>
<td>6.1</td>
<td>10.8</td>
</tr>
<tr>
<td>Bringelly</td>
<td>2,365</td>
<td>6,519</td>
<td>35,242</td>
<td>6.7</td>
<td>18.4</td>
</tr>
<tr>
<td>Minto</td>
<td>2,353</td>
<td>4,436</td>
<td>37,626</td>
<td>6.2</td>
<td>11.7</td>
</tr>
<tr>
<td>OTHER DISTRICTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Castlereagh &amp; Evan</td>
<td>3,026</td>
<td>10,271</td>
<td>37,674</td>
<td>8.0</td>
<td>27.2</td>
</tr>
<tr>
<td>Cawdor</td>
<td>1,553</td>
<td>4,335</td>
<td>45,348</td>
<td>3.4</td>
<td>9.5</td>
</tr>
<tr>
<td>Liverpool</td>
<td>1,881</td>
<td>6,959</td>
<td>47,033</td>
<td>3.9</td>
<td>14.7</td>
</tr>
<tr>
<td>Melville</td>
<td>1,643</td>
<td>5,394</td>
<td>40,899</td>
<td>4.0</td>
<td>13.1</td>
</tr>
<tr>
<td>Parramatta</td>
<td>3,967</td>
<td>12,562</td>
<td>68,450</td>
<td>5.7</td>
<td>18.3</td>
</tr>
<tr>
<td>Richmond</td>
<td>2,838</td>
<td>6,474</td>
<td>25,060</td>
<td>11.3</td>
<td>25.8</td>
</tr>
<tr>
<td>Sydney</td>
<td>2,860</td>
<td>17,285</td>
<td>147,054</td>
<td>1.9</td>
<td>11.7</td>
</tr>
<tr>
<td>Wilberforce</td>
<td>6,373</td>
<td>7,610</td>
<td>18,185</td>
<td>35.0</td>
<td>42.9</td>
</tr>
<tr>
<td>Windsor</td>
<td>4,246</td>
<td>7,543</td>
<td>21,219</td>
<td>20.0</td>
<td>35.5</td>
</tr>
<tr>
<td>CUMBERLAND</td>
<td>39,933</td>
<td>101,274</td>
<td>575,543</td>
<td>6.9</td>
<td>17.5</td>
</tr>
</tbody>
</table>

Compiled from "An Account of Land Held, Cleared and in Cultivation...1825": N.S.W. Returns 1825, p. 166 - M.L. Fractions of acres have been omitted from this table.
Appendix 5.

ATTEMPTS TO CROSS THE BLUE MOUNTAINS

(See Chapter 3)

This appendix lists in chronological order the most important of the journeys made by those attempting to find a route over the Blue Mountains. Following a note on the route, a list of the principal sources relating to the journey is given. Except where they are of special importance, secondary sources are not listed. Short titles are given for books; the full title will be found in the Bibliography.

1789 December

WILLIAM DAWES: westward from Prospect Hill to the Nepean and thence to Mt. Twiss.

Phillip - Sydney, 13 February 1790 (H.R.A., I, i, 156-7; also Note 126, pp. 746-7).
Peron & Freycinet, Voyage, i, 390.
Collins, Account, i, 88-9.
Tench, Narrative, p. 33.
"The Memorial of Lieutenant William Dawes, 1826" (R.A.H.S.J., xii (1926), 227-30).
H. Wright, "Where is Mount Twiss?" (R.A.H.S.J., xii (1926), 314-6).
(The most important attempt to identify Mt Twiss, and a beautiful piece of reconstruction in Historical Geography.)

1793 September

WILLIAM PATERSON: by boat up the Hawkesbury to Richmond Hill and thence about 10 miles up the Grose River in small boats.

Collins, Account, i, 312-3.
Peron & Freycinet, Voyage, i, 391-2.
Paterson - Banks, 23 August 1794 (Banks Papers, xviii, 231-4) (M.L. A61).
Appendix 5.

1794 August

HENRY HACKING: westward from the Nepean. (His exact route unknown. He claimed to have penetrated 20 miles further than any other European).

Collins, Account, i, 384.
Peron & Freycinet, Voyage, i, 392-3.

1796 June

GEORGE BASS: westward from Mount Hunter in the Cowpastures.

Peron & Freycinet, Voyage, i, 393-4.
R. Else Mitchell, "Bass's Land Explorations" (R.A.H.S.A., xxxvii (1951), 244-50).

1798 January and March

WILSON & BARRACKS: two journeys to the south and west of the Cowpastures. Their journals do not give any clear description of the route and it has been claimed that they reached Mt Towrang near Goulburn. This is unlikely; they possibly reached the Wingecarribee.

"Journey into the Interior of the Country of New South Wales", 24 January to 2 February 1798 (H.R.N.S.W., iii, 820-3).
"Journal of a Second Journey", 9 March to 2 April 1798 (H.R.N.S.W., iii, 823-8).
Hunter - Portland, 1 March 1798 (H.R.A., i, ii, 132-4; and Note 58, p. 715).
Hunter - Banks, 29 July and 21 August 1801 (H.R.N.S.W., iii, 819-20).
R.H. Cambage, "Explorations Beyond the Upper Nepean in 1798" (R.A.H.S.A., vi (1920) 1-35).
(Cambage's own description of the method he used in deciding that the party reached Mt Towrang makes this conclusion suspect. TMP).
M.H. Ellis, "The Haunted Expeditions" (The Bulletin, 8 July 1953, p. 25).
(Ellis contends that "Barracks" never existed and that the name became linked with Wilson's through a misreading of King's draft of his despatch of 1 November 1805, "Barracks" being written in the fair copy instead of "Barrallier".)
Appendix 5.

1802 November

FRANCIS BARRALLIER: from the Cowpastures south-westward to Nattai.

"Journal du voyage entrepris par ordre de son Excellence le Gouverneur King dans l'intérieur de New South Wales, par F. Barrallier, enseigne dans le corps de New South Wales" (H.R.N.S.W., v, 748-825 - with an English version).

King - Hobart, 30 October, 9 November, and 31 December 1802 (H.R.A., I, iii, 590, 653, and 748).

King - Banks, 2 October 1802 (H.R.N.S.W., iv, 845).

Caley - Banks, 1 & 8 November 1802 (H.R.N.S.W., iv, 881-3 & 887-8).

Perron & Freycinet, Voyage, i, 394-5.


P.G.King, "Present State of...New South Wales 1802" (H.R.A., I, iv, 232).

R.Else Mitchell, "Barrallier's Blue Mountains Explorations, 1802" (R.A.H.S.J., xxiv (1938), 291 ff).

E.Moxley, "Barrallier's Exploration of Christy's Creek" (R.A.H.S.J., xli (1955), 80-7).

1804 November

GEORGE CALEY: from Windsor westward to Mt Banks.

Ida Lee, Early Explorers in Australia, pp. 140-51.

(Idicates extracts from Caley's journal which is apparently in the British Museum)

Caley - Banks, 1 November & 16 December 1804, and 18 April 1805 (Banks Papers, viii, 153-5, 162, 165 & 174) (M.L. A79-1).


P.G.King, "Extracts from Mr Caley's Observations on his Journey..." (H.R.A., I, v, 593 ff.)

1806 (Winter)

GEORGE CALEY: followed Barrallier's 1802 route.

Caley - Banks, 4 November 1806 (Banks Papers, xx, 229-31) (M.L. A83).
Appendix 5.

1807 (?)

DAVID D. MANN: travelled four days into mountains, his route unknown.

Mann, Present Picture, pp. 31-2.

1813 May

GREGORY BLAXLAND, WILLIAM LAWSON & WILLIAM CHARLES WENTWORTH: westward from Emu Plains to Mt York along a route now followed by both the road and railway to Mt Victoria, and from Mt York across the valey of the Cox to Mt Blaxland.

Blaxland - Banks, 16 October 1816: British Museum MS 8958 (or 8953?), (Sydney Morning Herald, 5 January 1926).
Blaxland - Parker, 10 February 1823; published with the Journal of a Tour.
Lawson, (Journal), (M.L. C123).
Wentworth, (Journal), (M.L. C122).
Sydney Gazette, 22 May & 12 June 1813.
The Australian, 13 March 1827.

1813-14 November-January

GEORGE WILLIAM EVANS: along the route taken by Blaxland's party to Mt Blaxland and thence down the valley of the Fish River to the Macquarie near the present site of Bathurst.

G.C.O. 12 February 1814.
G.C.O. 10 June 1815
Macquarie - Bathurst, 28 April & 7 October 1814 (H.R.A., I, viii, 149 & 314).
Field Book 96 (Evans' traverse notes from near Mt Victoria towards Bathurst), (M.L.).

"Map of the Settlements of Port Jackson in New South Wales, including the new discovered country to the westward of the Blue Mountains in Dec. 1813" (n.d.) (M.L. F 15/30).

"Plan of (Evans') route crossing the Blue Mountains from Emu Plains to Bathurst in 1813 and 1814" (n.d.) (M.L. 2 copies F 15/31 and F 15/32).

"Copy of the original plan of (Evans') survey of the road 1813-14 from Emu Ferry to Bathurst, prepared by Gov. Macquarie's direction for the guidance of W. Cox in connection with the construction of the said road in 1815." (40 chains to 1 inch, 3 sheets). (M.L. Folio Room.)
## Appendix 6.

### SEASONAL CONDITIONS 1810-1820

*(See Chapter 3)*

<table>
<thead>
<tr>
<th>Year and Month</th>
<th>Seasonal Condition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1810 July</td>
<td>Slight rise in Hawkesbury River - no serious flooding.</td>
<td>S.G. 14 July 1810</td>
</tr>
<tr>
<td>September</td>
<td>Caterpillar plague.</td>
<td>S.G. 29 September 1810</td>
</tr>
<tr>
<td>Summer 1810-1811</td>
<td>Drought season - loss of maize crop - shortage of water in Sydney.</td>
<td>S.G. 2 March 1811</td>
</tr>
<tr>
<td>1811 February</td>
<td>Rains - slight flooding of Hawkesbury - loss of what in stack and maize in ground.</td>
<td>S.G. 30 March 1811</td>
</tr>
<tr>
<td>March</td>
<td>&quot;Intense drought&quot; for some months past. Wheat to be imported from Bengal.</td>
<td>Macquarie-Liverpool, 18 October 1811; H.R.A. I, vii, 396.</td>
</tr>
<tr>
<td>October</td>
<td>Best crops for some years - no floods.</td>
<td>S.G. 2 March 1812 and 4 April 1812.</td>
</tr>
<tr>
<td>1812 February</td>
<td>Rains late in February broke drought, but brought out swarms of caterpillars which destroyed pastures but not maize which was in too advanced a state to suffer much damage.</td>
<td>Macquarie-Liverpool, 17 November 1812; H.R.A. I, vii, 581.</td>
</tr>
<tr>
<td>November</td>
<td></td>
<td>S.G. 6 October 1814; Banks Papers, Vol. iv, 327 ff: M.L.</td>
</tr>
<tr>
<td>Summer 1812-1813</td>
<td>Dry season</td>
<td>S.G. 28 August and 25 September 1813; Macquarie-Bathurst, 19 January 1814; H.R.A. I, viii, 121.</td>
</tr>
<tr>
<td>1813 Winter</td>
<td>Without rain - failure of wheat crop - losses of stock.</td>
<td>S.G. 6 October 1814; Banks Papers, Vol. iv, 327 ff: M.L.</td>
</tr>
<tr>
<td>Spring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer 1813-1814</td>
<td>Drought</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 6.

<table>
<thead>
<tr>
<th>Year and Month</th>
<th>Seasonal Condition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>Caterpillar plague.</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>Drought - wheat poor - stock losing condition - plague of caterpillars.</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>Rains have given hopes of more abundant harvest than expected - pasturage improving - stock regaining condition.</td>
<td></td>
</tr>
<tr>
<td><strong>1815</strong> June</td>
<td>Long continued droughts expected to result in failure of harvest - wheat to be imported from Bengal.</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>Rain in December. Stock being grazed on Crown lands without permission.</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>Rains spoilt part of wheat crop - wheat will be scarce - fears of flooding.</td>
<td>S.G. 13 and 20 January 1816.</td>
</tr>
<tr>
<td>March</td>
<td>Droughts have caused great loss of crops and stock - rain has given hope of better seasons - wheat to be imported from Bengal.</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>Government stock in reduced state because of droughts.</td>
<td>S.G. 24 May 1816</td>
</tr>
<tr>
<td>May</td>
<td>Cold weather - pastures and stock poor - shortage of maize resulting from flooding.</td>
<td>S.G. 8 and 29 June, 13 August 1816.</td>
</tr>
<tr>
<td>June</td>
<td>Rains and floods - little damage.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 6.

<table>
<thead>
<tr>
<th>Year and Month</th>
<th>Seasonal Condition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1816 (ctd.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>Dry weather - pastures in a poor state.</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>Rains - slight flood damage expected on South Creek - prospects of good harvest.</td>
<td></td>
</tr>
<tr>
<td>1817 January</td>
<td>Heavy rain - damage to wheat.</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>Floods on Hawkesbury in late February and early March - worst since 1806 - crops less productive than usual - losses of grain and stock.</td>
<td>S.G. 25 January 1817. S.G. 15 February; 1, 8 and 15 March 1817.</td>
</tr>
<tr>
<td>December</td>
<td>&quot;Luxuriant and abundant&quot; harvest.</td>
<td></td>
</tr>
<tr>
<td>1818 March</td>
<td>Rains - flooding on South Creek - loss of maize.</td>
<td>Agriculture MSS, p. 2; M.L. S.G. 27 February 1819. Macquarie-Bathurst 24 March 1819; H.R.A. I, x, 89. S.G. 3 April 1819, 17 April 1819.</td>
</tr>
<tr>
<td>Summer 1818-1819</td>
<td>Dry season - loss of crops.</td>
<td></td>
</tr>
<tr>
<td>1819 February</td>
<td>Heavy rains February and March - floods on Hawkesbury - loss of maize.</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>Caterpillar plague</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>Shortage of grass - trespassers warned off properties.</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>Commencement of drought extending till February 1820.</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>Commissariat having difficulty in obtaining meat because of poor condition of stock.</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix 6.

<table>
<thead>
<tr>
<th>Year and Month</th>
<th>Seasonal Condition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1819 (cont'd.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>Shortage of grass - trespassers again warned off properties.</td>
<td>S.G., 9 October, 20 November 1819.</td>
</tr>
<tr>
<td>December</td>
<td>Reduction in meat ration because of difficulty in obtaining beasts fit to slaughter.</td>
<td>G.G.O., 22 December 1819.</td>
</tr>
<tr>
<td>1820 February</td>
<td>Drought for last six months.</td>
<td>Macquarie-Bathurst, 28 February 1820; H.R.A. I, x, 279. S.G., 5 February 1820.</td>
</tr>
<tr>
<td>April</td>
<td>Heavy rains - loss of wheat in stacks - wheat fields had to be reseeded.</td>
<td>Macquarie-Bathurst, 1 September 1820; H.R.A. I, x, 367. S.G., 3 June 1820.</td>
</tr>
<tr>
<td>May</td>
<td></td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>Stock in poor condition.</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>Season dry - drought expected.</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>Rains - good prospects for harvest.</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>Floods.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 7.

CATERPILLARS
(See Chapter 3)

The caterpillar whose recurrent appearance in destructive plagues harassed the early settlers in New South Wales, appears to have been a species of the Army Worm which still causes damage to pastures and crops in coastal areas of New South Wales and Queensland.

From descriptions given of the caterpillar in the Sydney Gazette, it appears that it was about an inch long, "the back a dark brown, approaching to a black, and the belly streaked with yellow." The caterpillars appeared between September and April, often soon after rain. Frequently, they were "destroyed" by rain and the early settlers always looked for rain to end the plagues.

The most complete contemporary account of them appeared as a letter from "Observer" in the Sydney Gazette of 1st November 1822: a letter which reveals its author to have been not only an acute and perspicacious "Observer" but also a sagacious adviser, and which is worthy of full quotation.

"To the Editor of the Sydney Gazette,

Sir,

If the following description of, and remarks on, the progress and propagation of the caterpillars, which recently committed such devastation on sundry tracts of growing wheat, should appear to you worthy submitting to the Public, you are at liberty so to do.

1. See The Sydney Gazette for 29 September 1810, 2 March 1812, 4 April 1812, 12 September 1812, 2 April 1814, 8 October 1814, 3 April 1819, 4 October 1822, 11 October 1822, 1 November 1822, 24 March 1825, 31 March 1825. This list is not exhaustive, but contains the major references to caterpillars in the period 1810-25.
2. S.G. 2 March 1812.

379.
Appendix 7.

The caterpillar alluded to when full grown and at rest, is about an inch long; and, when travelling, increases its length nearly half-an-inch. Its body is smooth, dark coloured, with white and yellowish streaks; has twelve circular membraneous rings, and moves with sixteen feet.

These caterpillars burst from their eggs early in September, and towards the middle of the month many had acquired their destructive growth; and though numbers were seen feeding on the leaves of the wheat in the day-time, yet they appeared in little account when compared with the myriads which issued forth from under the clods and rubbish, as night set in, and fed on the wheat until day-light; this nocturnal exhibition characterising their species to be that of the moth. The devouring ravages of these caterpillars was so great, that every sufferer was anxiously looking for rain to destroy them; and, when the wished-for rain came, what was the disappointment, that, in lieu of destroying them, it seemed to have opened the hitherto sun-parched ground, and added millions of young ones, not much larger than maggots, to the former clusters. Hence it appeared, that moderate rain, in this temperate season of the year, only added to the evil.

On the evening of the 8th of this month, a heavy hailstorm fell along the course of the Nepean, and destroyed vast numbers. After this, the first swarms being full grown and fed, formed cones and cells in the light loose mould, among the remaining bladeless stalks of wheat; there they acquired the pupa state, in which they remained for eleven days, when the author of these remarks discovered numbers of them to have been metamorphosed into a drab-coloured moth, with one perfect black dot, and a number of very small ones on each wing. From this period, the vast numbers which sheltered under the surface of the earth, to undergo transmutation to the harmless crysalis, or pupa state, so far exceeded the increase, that few are to be seen at the present time. However, like everything else, they have their season, and cannot exceed it. I observed they had their enemies too, for I never before saw such swarms of a fly called the ichneumon; it has four reddish-coloured wings, a long thin dark-coloured body, and a three-forked bristley tail. These formidable insects were unceasingly employed piercing and depositing their eggs in the backs of the largest caterpillars, feeding on the wheat in the day-time; and the flies of this class are indebted for their birth chiefly to the caterpillar, upon whose vitals they prey until they come to
maturity. Thus, Divine Wisdom guards against the destructive consequences which might result from every pupa of the caterpillar bringing forth a moth capable of propagating its species, in perhaps sixteen hundred fold.

Beneath the surface of the ground, where tracts of wheat suffered from the caterpillar, is now thickly planted with them in their incrustated state; and, if one-third their numbers have escaped the ichneumon fly, and bring forth moths, the deposit of eggs, for the continuance of the brood of caterpillars, must be alarming indeed. Insects seem to possess that instinctive knowledge, not only to lay their eggs in those situations which afford the best prospect of their hatching safely, but promise a convenient supply of suitable food for the young brood. Hence the moth, which produced the destructive caterpillar in question, selected on the negligently cultivated tracts of wheat, situate on light sandy soils, for the deposit of their eggs. Where maize stalks were heaped round stumps, or remained strewn over the surface of wheat ground, the hollow cones of the stalks afforded security for the myriads of the eggs deposited therein. Weeds, and all manner of rubbish, so slovenly left on the young sown wheat fields, proved convenient depositories for expeditiously hatching caterpillars from the eggs. Besides, the moth does not appear insensible to the capability of such light sandy soils, of hatching its eggs, through the vivifying influence of the sun, in seasons of drought. The caterpillar alluded to, can survive many days wet in a mild state of the atmosphere; but the egg, from whence it is to be hatched, is easily destroyed by wet, or moisture; consequently, the want of timely rain, in the spring, too reasonably accounts for the visitation of those vermin many have suffered from, owing to the quality of the soil and negligent cultivation herein suggested. It appears that the ravages of the caterpillar, throughout the Colony, have been mostly confined to wheat growing on light sandy soils; and more especially where it succeeded maize crops, and where the ground was left foul, with the stalks and other rubbish. It may have been observed, that wheat, growing on new cultivated ground, even on light sandy soil, was free from the caterpillars, unless it was so near foul sown crops, already infested with them, that they fed their way to the new cropped ground. It also appears that wheat, growing on a description of ground, which is not so desirable to possess, except in seasons when the caterpillars visit; the superstrata of which is sandy, red, or white clay, entirely escaped them. This may be accounted for by such ground seldom growing maize, or even producing much
Appendix 7.

rubbish; and, by the instinctive discernment of the moth, not depositing its eggs on a surface that would retain water a sufficient time to destroy them; and the hard and tenacious quality, unsuited for the caterpillar, undergoing its numerous succession of changes.

The low, but rich alluvial banks of the Hawkesbury, forced the growth of the wheat so luxuriantly, that, in most places, it outgrew the destructive powers of the caterpillar. But the lofty and considerably worn-out tracts of light sandy ground, on the banks of the Nepean, suffers materially; more particularly, owing to the slovenly cultivation previously described. It may be apprehended, from the light sandy quality of the soil in several of the interior districts towards the Cowpastures, that the wheat crop has suffered material injury by the caterpillar. However, the late providential rains we have had will yet recover much; which, a short time ago, promised no return. It must be allowed, that many acres of wheat have been irrecoverably destroyed by the caterpillar; but still the crop is extensive, and promises a large supply. Besides, the first alarm gave a stimulus for the cultivation of a very increased maize crop.

If we have not heavy rain between January and March next, it is incumbent on us to use every exertion to destroy the myriads of eggs which the moth of the late caterpillar will continue, for some time, to deposit in stock-yards, rubbish, and the light sandy soils before stated. Therefore, the stubble of the wheat, and all foul vegetable rubbish or weeds, ought to be burnt off, and rollers kept ready to use over the spots they are seen issuing from. In autumn they have not the wheat crop to keep them at home, and they will force their course over our pasturage with the similar destructive ravages in those of 1819, to which the present caterpillar bears a strong resemblance; nor are those, like the former, at all nice as to the quality of their food; for, when removed from the wheat, they feed on clover, grass, or herbage, with apparently equal taste.

I am, Mr Editor, your obedient servant,

OBSERVER."

Writing some years after the events he is describing, George Suttor, a settler in the Baulkham Hills district gives this account.
Appendix 7.

of the caterpillar plagues:

"But now the Colony was visited with an extraordinary number of caterpillars, millions and millions spread over and around Parramatta devouring every blade of grass; we were frequently obliged to sweep them in heaps out of the house, they were about an inch in length of a yellowish green color with black stripes on their sides, the ground was covered with them for miles all travelling in the same direction nearly from North to South. This was in the month of March and they continued nearly a fortnight over the ground and then disappeared, leaving the earth bare of grass, which is their favourite food. This caused the sheep and cows to suffer severely and many died.

This calamity forced us to think of passing over the Blue Mountains to the plains of Bathurst in search of pasture."

The descriptions and information available make it impossible for the caterpillars to be positively identified, but it would appear that it was a common army worm *Pseudaletia convecta* (Walker). Dr D.F. Waterhouse of the Division of Entomology, C.S.I.R.O. Canberra, describes these as follows:

"The caterpillars of this species have longitudinal stripes of black and other paler colours including various shades of yellow. Their preferred plant hosts are the Gramineae and they cause considerable damage at times to cereal crops and pastures, especially in coastal and sub-coastal New South Wales and southern Queensland. It has been observed on many occasions that serious infestations follow floods but the causes of this have not been investigated. Larvae are active from September to April. When numerous the larvae are gregarious and, when food is scarce advance on a front towards standing crops or pasture." 4

In Australian entomological literature, army worms have been given several other names: *Pseudaletia australis*, Francelemont 1951; *P. unipuncta*, Haworth; and *Corchis unipuncta*.


4. In a private communication to the author, 20 July 1955.
Appendix 7.

An outbreak of army worms in the Summer 1903-4, however, corresponds fairly closely with the plagues of the early part of last century. On this occasion, the caterpillars appeared after heavy rains at Singleton, and later were reported at Camden, Richmond, Windsor, Penrith and Tamworth, as well as in Victoria and Queensland. Considerable numbers of the red-legged ichneumon (Rhyssa semipuncta) were noticed to be attacking the caterpillars. The caterpillars themselves were described as being of a dull olive green tint varying to brownish yellow, the head lighter, and three parallel light stripes down the centre of the back, another on each side below which there was a darker bar followed by a lighter band along the lower edge of the segments. The name given the caterpillar on this occasion was Leucania unipuncta.5

References:


### Appendix 8.

**NEW SOUTH WALES: NUMBER OF CATTLE AND SHEEP, 1794-1829**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle</th>
<th>Sheep</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1794</td>
<td>40</td>
<td>526</td>
<td>H.R.A. I, i, 480.</td>
</tr>
<tr>
<td>1796</td>
<td>227</td>
<td>1,531</td>
<td>H.R.A. I, i, 664.</td>
</tr>
<tr>
<td>1799</td>
<td>709</td>
<td>5,103</td>
<td>H.R.A. I, ii, 384.</td>
</tr>
<tr>
<td>1800 Feb</td>
<td>829</td>
<td>5,676</td>
<td>H.R.A. I, ii, 469.</td>
</tr>
<tr>
<td>1800 Aug</td>
<td>1,044</td>
<td>6,124</td>
<td>H.R.A. I, ii, 527, 632.</td>
</tr>
<tr>
<td>1801</td>
<td>1,242</td>
<td>7,046</td>
<td>H.R.A. I, iii, 145.</td>
</tr>
<tr>
<td>1802</td>
<td>1,743</td>
<td>8,632</td>
<td>Ibid.</td>
</tr>
<tr>
<td>1803</td>
<td>2,450</td>
<td>11,275</td>
<td>H.R.A. I, v, 42.</td>
</tr>
<tr>
<td>1804</td>
<td>3,264</td>
<td>16,501</td>
<td>Ibid.</td>
</tr>
<tr>
<td>1809 Not available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1812</td>
<td>17,678</td>
<td>59,949</td>
<td>H.R.A. I, vii, 639.</td>
</tr>
<tr>
<td>1813</td>
<td>21,543</td>
<td>65,121</td>
<td>C.S.I.I.L. 12 (70-97), 209.</td>
</tr>
<tr>
<td>1818 Not available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1819</td>
<td>42,789</td>
<td>75,369</td>
<td>H.R.A. I, x, 287.</td>
</tr>
<tr>
<td>1820</td>
<td>54,103</td>
<td>99,487</td>
<td>H.R.A. I, x, 535.</td>
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<tr>
<td>1823</td>
<td>-</td>
<td>177,935</td>
<td>Ibid.</td>
</tr>
<tr>
<td>1824</td>
<td>115,427</td>
<td>184,830</td>
<td>C.S.I.I.L. 22 (54-89), 141.</td>
</tr>
<tr>
<td>1825</td>
<td>134,519</td>
<td>237,622</td>
<td>NSW Returns 1825, p. 167</td>
</tr>
<tr>
<td>1826 Not available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1827 Not available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1828</td>
<td>248,440</td>
<td>504,775</td>
<td>NSW Returns 1828, p.200</td>
</tr>
<tr>
<td>1829 Not available</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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385.
### Appendix 9.

**NEW SOUTH WALES: DISTRIBUTION OF POPULATION, 1821, 1825 and 1828**

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>1821&lt;sup&gt;a&lt;/sup&gt;</th>
<th></th>
<th>1825&lt;sup&gt;b&lt;/sup&gt;</th>
<th></th>
<th>1828&lt;sup&gt;c&lt;/sup&gt;</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>CUMBERLAND PLAIN&lt;sup&gt;d&lt;/sup&gt;</td>
<td>27,845</td>
<td>93.6</td>
<td>26,041</td>
<td>83.6</td>
<td>25,142</td>
<td>68.7</td>
</tr>
<tr>
<td>OUTSIDE CUMBERLAND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td>86&lt;sup&gt;e&lt;/sup&gt;</td>
<td>0.3</td>
<td>601&lt;sup&gt;g&lt;/sup&gt;</td>
<td>2.0</td>
<td>1,546</td>
<td>4.2</td>
</tr>
<tr>
<td>Bathurst and District</td>
<td>287&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0.9</td>
<td>1,109</td>
<td>3.5</td>
<td>2,072&lt;sup&gt;g&lt;/sup&gt;</td>
<td>5.6</td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td>-&lt;sup&gt;g&lt;/sup&gt;</td>
<td>-</td>
<td>-&lt;sup&gt;h&lt;/sup&gt;</td>
<td>-</td>
<td>792</td>
<td>2.2</td>
</tr>
<tr>
<td>Hunter Valley</td>
<td>-&lt;sup&gt;i&lt;/sup&gt;</td>
<td>-</td>
<td>1,673</td>
<td>5.4</td>
<td>3,260&lt;sup&gt;j&lt;/sup&gt;</td>
<td>8.9</td>
</tr>
<tr>
<td>TOTAL OUTSIDE CUMBERLAND</td>
<td>373</td>
<td>1.2</td>
<td>3,383</td>
<td>10.9</td>
<td>7,670</td>
<td>21.0</td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
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</tr>
<tr>
<td>Penal and Distant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settlements</td>
<td>1,271&lt;sup&gt;k&lt;/sup&gt;</td>
<td>4.2</td>
<td>1,709&lt;sup&gt;l&lt;/sup&gt;</td>
<td>5.5</td>
<td>1,337&lt;sup&gt;m&lt;/sup&gt;</td>
<td>3.7</td>
</tr>
<tr>
<td>On Vessels</td>
<td>294</td>
<td>1.0</td>
<td>-&lt;sup&gt;l&lt;/sup&gt;</td>
<td>-</td>
<td>753</td>
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<tr>
<td>Road Parties</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,696</td>
<td>4.6</td>
</tr>
<tr>
<td>TOTAL N.S.W.</td>
<td>29,783</td>
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<td>31,133&lt;sup&gt;n&lt;/sup&gt;</td>
<td>100.0</td>
<td>36,598</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Notes to this Table are given overleaf.
Appendix 9. NEW SOUTH WALES: DISTRIBUTION OF POPULATION, 1821, 1825 and 1828

Notes on Table

   Exclusive of the civil and military staffs.

b. Compiled from "An Account of the Population...1825": N.S.W. Returns 1825, p. 163 (M.L.).
   Exclusive of the civil and military staffs.

c. Compiled from "Return of the Population...according to a Census Taken in November 1828":
   N.S.W. Returns 1828, pp. 146-7 (M.L.).

d. The total of the figures for all the Cumberland Muster Districts: Appin, Airds,
   Bringelly, Campbelltown, Castlereagh and Evan, Cawdor, Emu Plains, Liverpool, Melville
   and Bathurst, Minto, Parramatta, Richmond, Sydney, Wilberforce and Windsor.

e. This figure was quoted by Charles Throsby, who supervised the muster in Argyle, in a
   letter to Governor Macquarie. As Argyle was included in the Liverpool muster district
   for 1821, 86 has been subtracted from the Cumberland total and is shown here. (See
   Throsby - Macquarie, 8 October 1821: T.P.).

f. Includes Wellington Valley.

g. Camden figures would be included with those for Argyle, and Illawarra's in Cumberland -
   Illawarra was included in the Appin muster district.

h. Included in Argyle and Cumberland: see Note g.

i. Newcastle's population is included in Penal Settlements.

j. Includes 35 at Manning River.

k. Newcastle 1,169, and Port Macquarie 102.

l. Wellington Valley 84, Port Macquarie 1,463, Moreton Bay 45, Norfolk and Melville Islands
   117.

m. Composition not known - listed in Census Return as "Penal and Distant Settlements".

n. Does not include 5,203 given in the "Account" as "Unaccounted for in the Muster Books".


Appendix 10.

NEW SOUTH WALES: DISTRIBUTION OF ALIENATED, CLEARED AND CULTIVATED LAND, AND OF LIVESTOCK, 1821, 1825 and 1828

Table A: Alienated Land (Acres)

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>1821(^a)</th>
<th>1825(^b)</th>
<th>1828(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>CUMBERLAND FLAND(^d)</td>
<td>378,308</td>
<td>99.2</td>
<td>575,543</td>
</tr>
<tr>
<td>OUTSIDE CUMBERLAND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td>e</td>
<td></td>
<td>37,690</td>
</tr>
<tr>
<td>Bathurst and District</td>
<td>2,520</td>
<td>0.7</td>
<td>91,636</td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td>-</td>
<td></td>
<td>-(^h)</td>
</tr>
<tr>
<td>Hunter Valley</td>
<td>638</td>
<td>0.1</td>
<td>67,798</td>
</tr>
<tr>
<td>Manning River</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Fort Macquarie</td>
<td>-</td>
<td></td>
<td>1,000</td>
</tr>
<tr>
<td>TOTAL OUTSIDE CUMBERLAND</td>
<td>3,158</td>
<td>0.8</td>
<td>198,124</td>
</tr>
<tr>
<td>TOTAL N.S.W.</td>
<td>381,466</td>
<td>100.0</td>
<td>773,667</td>
</tr>
</tbody>
</table>

Notes to the Tables in this Appendix will be found following Table E.
Appendix 10.

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>1821a Number</th>
<th>%</th>
<th>1825b Number</th>
<th>%</th>
<th>1828c Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUMBERLAND PLAINd</td>
<td>56,127</td>
<td>96.3</td>
<td>101,274</td>
<td>79.2</td>
<td>104,324</td>
<td>46.3</td>
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<td>OUTSIDE CUMBERLAND</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathurst and District</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunter Valley</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manning River</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port Macquarie</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL OUTSIDE CUMBERLAND</td>
<td>2,185</td>
<td>3.7</td>
<td>26,601</td>
<td>20.8</td>
<td>121,488</td>
<td>53.7</td>
</tr>
<tr>
<td>TOTAL N.S.W.</td>
<td>58,312</td>
<td>100.0</td>
<td>127,875</td>
<td>100.0</td>
<td>225,812</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### Table C: Cultivated Land (Acres)

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>1821&lt;sup&gt;a&lt;/sup&gt;</th>
<th>1825&lt;sup&gt;b&lt;/sup&gt;</th>
<th>1826&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>CUMBERLAND PLAIN&lt;sup&gt;d&lt;/sup&gt;</td>
<td>31,287</td>
<td>97.0</td>
<td>39,937</td>
</tr>
<tr>
<td>OUTSIDE CUMBERLAND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td>42</td>
<td>0.1</td>
<td>589</td>
</tr>
<tr>
<td>Bathurst and District</td>
<td>465</td>
<td>1.4</td>
<td>1,805</td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Hunter Valley</td>
<td>472</td>
<td>1.5</td>
<td>2,552</td>
</tr>
<tr>
<td>Manning River</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Port Macquarie</td>
<td>-</td>
<td></td>
<td>631</td>
</tr>
<tr>
<td>TOTAL OUTSIDE CUMBERLAND</td>
<td>979</td>
<td>3.0</td>
<td>5,577</td>
</tr>
<tr>
<td>TOTAL N.S.W.</td>
<td>32,266</td>
<td>100.0</td>
<td>45,514</td>
</tr>
</tbody>
</table>
### Table D: Sheep (Head)

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>1821&lt;sup&gt;a&lt;/sup&gt;</th>
<th>1825&lt;sup&gt;b&lt;/sup&gt;</th>
<th>1828&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td><strong>CUMBERLAND PLAIN&lt;sup&gt;d&lt;/sup&gt;</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumberland</td>
<td>85,490</td>
<td>71.4</td>
<td>104,643</td>
</tr>
<tr>
<td><strong>OUTSIDE CUMBERLAND</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td>6,063</td>
<td>5.1</td>
<td>31,864</td>
</tr>
<tr>
<td>Bathurst and District</td>
<td>27,848</td>
<td>23.2</td>
<td>92,067</td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Hunter Valley</td>
<td>376</td>
<td>0.3</td>
<td>8,919</td>
</tr>
<tr>
<td>Manning River</td>
<td></td>
<td></td>
<td>129</td>
</tr>
<tr>
<td>Port Macquarie</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL OUTSIDE CUMBERLAND</strong></td>
<td>34,287</td>
<td>28.6</td>
<td>132,979</td>
</tr>
<tr>
<td><strong>TOTAL N.S.W.</strong></td>
<td>119,777</td>
<td>100.0</td>
<td>237,622</td>
</tr>
</tbody>
</table>
### Table E: Cattle (Head)

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>1821(^a)</th>
<th>1825(^b)</th>
<th>1828(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>CUMBERLAND PLAIN(^d)</td>
<td>57,366</td>
<td>84.4</td>
<td>85,907</td>
</tr>
<tr>
<td></td>
<td>65,571</td>
<td>26.4</td>
<td></td>
</tr>
<tr>
<td>OUTSIDE CUMBERLAND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td>4,462</td>
<td>6.6</td>
<td>22,028</td>
</tr>
<tr>
<td>Bathurst and District</td>
<td>5,885</td>
<td>8.7</td>
<td>21,906</td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hunter Valley</td>
<td>236</td>
<td>0.3</td>
<td>4,495</td>
</tr>
<tr>
<td>Manning River</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Port Macquarie</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL OUTSIDE CUMBERLAND</td>
<td>10,583</td>
<td>15.6</td>
<td>48,612</td>
</tr>
<tr>
<td></td>
<td>182,869</td>
<td>73.6</td>
<td></td>
</tr>
<tr>
<td>TOTAL N.S.W.</td>
<td>67,949</td>
<td>100.0</td>
<td>134,519</td>
</tr>
<tr>
<td></td>
<td>248,440</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 10.

NOTES

Tables A, B, C, D, and E.

a Compiled from "A General Statement of Land and Stock...1821": H.R.A. I, x, 577.

b Compiled from tables in M.S.W. Returns 1825, pp. 116 and 167 (M.I.)

c Compiled from "Amended Return of Land Granted, Cleared, Cultivated, and of Livestock, as shown by the Census...1828": M.S.W. Returns 1828, p. 200.

d The total of figures for all the Cumberland Muster Districts. These are listed in Note "d" to Appendix 9.

e Figures for Argyle not available as the area was included in the Liverpool Muster District.

f Includes Wellington Valley.

g Included with Cumberland. The County of Camden was in the Liverpool Muster District, and Illawarra in the Appin District.

h Camden included in Argyle, and Illawarra in Cumberland.

i Port Macquarie was omitted from the "Amended Return" of 1828.
Appendix 11.

THE LIMITS OF THE AREA FOR SETTLEMENT, 1826 and 1829

The following are extracts from the Government Orders of 5th September 1826 and 14th October 1829 which set and revised the limits of the settled area.

Government Order, Regulations for the Granting and Sale of Land, 5th September 1826.

(Paragraph 5) "The following Boundaries have been fixed within which Persons who may be allowed to purchase or to receive Grants by paying an annual Quit Rent, will be permitted to make their Selection. The Northern Boundary is to be from Cape Hawke in a line due west to Wellington Valley.

"The Western Boundary to be the River Macquarie from Wellington Valley to the 33rd parallel of Latitude; from thence the line to be extended to the 148th Degree of East Longitude; and from that point directly South, until it reaches the River Lachlan; from thence due East to Campbell's River, pursuing the line of that River to the Southward, and so on to the latitude of Bateman Bay, which forms the Southern Boundary."

Government Order, October 14, 1829.

"His Excellency the Governor directs it to be notified, with reference to the 5th Paragraph of the Government Order of 5th September 1826, No. 35, that the Boundaries of the Colony within which Settlers will be permitted to select Land have been fixed, for the present, as follows, viz. ---

On the North.

The River Manning, from the Seacoast, Westward, to the Chain of Mountains at the Head of that River; and that Chain, extending in a general Direction nearly Westward, from Mount Royal to a Conical Summit distant four and a half Miles, North 46° West, from the Burning Hill at Wingan, and
Appendix 11.

continuing thence Westward, by Oxley's Peak and Pandora's Pass, to where it is intersected by a Line due North from the Station at Wellington Valley; so as to include all the Streams, Valleys, and Ravines which descent to the Rivers Goulburn and Hunter.

On the West.

The Line above-mentioned to the Station on the Junction of the Rivers Bell and Macquarie, at Wellington Valley; thence the Macquarie to the Junction of the Currigurra Rivulet at the North-Western Angle of the County of Bathurst; thence the Western Boundary of that County, as described below, and a Line in Continuation thereof bearing due South to the Pic of Pabral, a remarkable Mountain of a Conical Form; and thence the Mountains of Warragong, a lofty Chain which extends first Southward from Pabral, and then Eastward.

On the South.

The Chain of Mountains extending from Mount Murray, the highest Point of Warragong Chain, by the Twins, two remarkable Pics in the Latitude of Bateman Bayn, named Tindery by the Natives; and thence, an East Line to the Shoal-Haven River at the South-Western Angle of the County of Saint Vincent, and that River and the River Murroo, according to the County Boundary, as described below, to the Seacoast.

On the East.

The Seacoast, from the Mouth of the Murroo, to the Mouth of the Manning.

Contents.

Thirty-four thousand five hundred and five, 34,505 Square Miles, or Twenty-two Million Eighty-three thousand and two hundred, 22,083,200 Acres."
### Table A: Leases of Crown Land, 1829

<table>
<thead>
<tr>
<th>County</th>
<th>Number of Leases</th>
<th>Area Leased (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUMBERLAND</td>
<td>7</td>
<td>9,820</td>
</tr>
<tr>
<td>OUTSIDE CUMBERLAND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle</td>
<td>26</td>
<td>66,080</td>
</tr>
<tr>
<td>Bathurst</td>
<td>1</td>
<td>640</td>
</tr>
<tr>
<td>Bligh</td>
<td>1</td>
<td>5,000</td>
</tr>
<tr>
<td>Brisbane</td>
<td>6</td>
<td>20,780</td>
</tr>
<tr>
<td>Camden</td>
<td>15</td>
<td>42,610</td>
</tr>
<tr>
<td>Durham</td>
<td>30</td>
<td>85,520</td>
</tr>
<tr>
<td>Gloucester</td>
<td>3</td>
<td>7,040</td>
</tr>
<tr>
<td>Hunter</td>
<td>1</td>
<td>10,000</td>
</tr>
<tr>
<td>King</td>
<td>3</td>
<td>11,000</td>
</tr>
<tr>
<td>Murray</td>
<td>2</td>
<td>5,000</td>
</tr>
<tr>
<td>Northumberland</td>
<td>35</td>
<td>63,310</td>
</tr>
<tr>
<td>Phillip</td>
<td>1</td>
<td>2,000</td>
</tr>
<tr>
<td>Roxburgh</td>
<td>6</td>
<td>12,700</td>
</tr>
<tr>
<td>St. Vincent</td>
<td>4</td>
<td>19,920</td>
</tr>
<tr>
<td>Wellington</td>
<td>1</td>
<td>4,000</td>
</tr>
<tr>
<td>Westmoreland</td>
<td>5</td>
<td>8,560</td>
</tr>
<tr>
<td><strong>Total Outside Cumberland</strong></td>
<td><strong>140</strong></td>
<td><strong>364,160</strong></td>
</tr>
<tr>
<td><strong>N.S.W. TOTAL</strong></td>
<td><strong>147</strong></td>
<td><strong>373,980</strong></td>
</tr>
</tbody>
</table>

This table has been compiled from the lists of leases published in the *Government Notices* of 22 and 30 April, 16 July, 9 August, 27 October and 28 December 1829. When the earlier notices were published the boundaries and names of some counties had not been decided and a number of leases were listed under the heading "County Unnamed". The description of the locations of these leases in the *Government Notices* and in the Colonial Secretary's *Abstract of Monthly Leases...* (Mitchell Library) have been used to determine the name of the county in which they were situated when the counties were erected, and so there are no leases shown in the table for unnamed counties.
Appendix 12.

Table B: Lands Granted, 1829

<table>
<thead>
<tr>
<th></th>
<th>Lands Granted in and before 1828&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Lands Granted in 1829&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>435,550</td>
<td>2,976</td>
<td>438,526</td>
</tr>
<tr>
<td>Outside Cumberland</td>
<td>2,331,383</td>
<td>209,795</td>
<td>2,541,178</td>
</tr>
<tr>
<td>Grants to Trustees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Church &amp; School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporation</td>
<td></td>
<td>419,199&lt;sup&gt;c&lt;/sup&gt;</td>
<td>419,199</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,766,933</td>
<td>631,970</td>
<td>3,398,903&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup> From the "Amended Return of Land Granted...1828": N.S.W. Returns 1828, p. 200.

<sup>b</sup> From the "Abstract of Lands Granted in 1829...": N.S.W. Returns 1829, p. 205 ff.

<sup>c</sup> 16,448 acres in Cumberland and 402,751 in the Counties of Bathurst, Camden, Durham, Gloucester, Northumberland and St. Vincent.

<sup>d</sup> The 1829 "Abstract" gives the total number of acres granted in 1829 as 3,538,316. This is based on the original 1828 return which gives the total number of acres granted as 2,906,346; 139,413 more than the total in the "Amended Return..." which has been used in the compilation of this table.
### Table C: Distribution of Occupied Land, 1829

<table>
<thead>
<tr>
<th></th>
<th>Occupied Land (Acres)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CUMBERLAND</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td>438,526</td>
<td>13.1</td>
</tr>
<tr>
<td>Leases</td>
<td>9,820</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>448,346</td>
<td>13.4</td>
</tr>
<tr>
<td><strong>OUTSIDE CUMBERLAND</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td>2,541,178</td>
<td>75.7</td>
</tr>
<tr>
<td>Leases</td>
<td>364,160</td>
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<tr>
<td></td>
<td>2,905,338</td>
<td>86.6</td>
</tr>
<tr>
<td><strong>TOTAL N.S.W.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td>2,979,704</td>
<td>88.8</td>
</tr>
<tr>
<td>Leases</td>
<td>373,980</td>
<td>11.2</td>
</tr>
</tbody>
</table>

Compiled from Tables A and B of this Appendix.

**Note:** This table does not include the land which was granted to the Trustees of the Church and School Corporation in "Grants" or the part of this land leased by them to individual settlers under "Leases".
Appendix 13.

NEW SOUTH WALES: ADULT MALE POPULATION, 1828

All three tables in this Appendix have been compiled from the "Return of the Population of New South Wales according to a Census taken in November 1828": N.S.W. Returns, 1828, pp. 146 - 7, M.I.

Table A: Composition of the Non-Convict Adult Male Population, 1828.

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>Males above 12 years of age</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Game Free</td>
<td>Born in</td>
<td>Free by</td>
<td>Pardoned</td>
<td>TOTAL</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>Colony</td>
<td>Servitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUMBERLAND</td>
<td>1,679</td>
<td>1,451</td>
<td>3,969</td>
<td>712</td>
<td>7,811</td>
<td>73.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21.5</td>
<td>18.6</td>
<td>50.8</td>
<td>9.1</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OUTSIDE CUMBERLAND</td>
<td>101</td>
<td>72</td>
<td>300</td>
<td>43</td>
<td>516</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td>19.6</td>
<td>14.0</td>
<td>58.1</td>
<td>8.3</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathurst and District b</td>
<td>114</td>
<td>54</td>
<td>300</td>
<td>16</td>
<td>484</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23.6</td>
<td>11.1</td>
<td>62.0</td>
<td>3.3</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td>62</td>
<td>30</td>
<td>126</td>
<td>19</td>
<td>237</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26.2</td>
<td>12.7</td>
<td>53.1</td>
<td>8.0</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunter Valley c</td>
<td>347</td>
<td>66</td>
<td>355</td>
<td>45</td>
<td>813</td>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>42.7</td>
<td>8.1</td>
<td>43.7</td>
<td>5.5</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL OUTSIDE CUMBERLAND</td>
<td>624</td>
<td>222</td>
<td>1,061</td>
<td>123</td>
<td>2,050</td>
<td>19.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30.4</td>
<td>10.8</td>
<td>52.8</td>
<td>6.0</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER d</td>
<td>258</td>
<td>250</td>
<td>252</td>
<td>-</td>
<td>760</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>33.9</td>
<td>32.9</td>
<td>33.2</td>
<td></td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL N.S.W.</td>
<td>2,561</td>
<td>1,923</td>
<td>5,302</td>
<td>835</td>
<td>10,621</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24.1</td>
<td>18.1</td>
<td>50.0</td>
<td>7.8</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes to this Table beneath Table C.
Appendix 13.

Table B: Composition of Total Adult Male Population, 1828.

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>Males above 12 years of age</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Came Free</td>
<td>Born in Colony</td>
</tr>
<tr>
<td>CUMBERLAND a</td>
<td>1,679</td>
<td>1,451</td>
</tr>
<tr>
<td>OUTSIDE CUMBERLAND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td>101</td>
<td>72</td>
</tr>
<tr>
<td>Bathurst and District b</td>
<td>114</td>
<td>54</td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td>62</td>
<td>51</td>
</tr>
<tr>
<td>Hunter Valley c</td>
<td>347</td>
<td>66</td>
</tr>
<tr>
<td>TOTAL OUTSIDE CUMBERLAND</td>
<td>624</td>
<td>222</td>
</tr>
<tr>
<td>OTHER d</td>
<td>258</td>
<td>250</td>
</tr>
<tr>
<td>TOTAL N.S.W.</td>
<td>2,561</td>
<td>1,923</td>
</tr>
</tbody>
</table>

Notes to this Table beneath Table C.
Appendix 13.

Table C : Distribution of Male Convicts in the Settled Districts, 1828.
(Excluding those in penal settlements and road gangs.)

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUMBERLAND</td>
<td>6,894</td>
<td>61.9</td>
</tr>
<tr>
<td>OUTSIDE CUMBERLAND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle and St. Vincent</td>
<td>762</td>
<td>6.8</td>
</tr>
<tr>
<td>Bathurst and District</td>
<td>1,307</td>
<td>11.7</td>
</tr>
<tr>
<td>Camden and Illawarra</td>
<td>352</td>
<td>3.2</td>
</tr>
<tr>
<td>Hunter Valley</td>
<td>1,831</td>
<td>16.4</td>
</tr>
<tr>
<td>TOTAL OUTSIDE CUMBERLAND</td>
<td>4,252</td>
<td>38.1</td>
</tr>
<tr>
<td>TOTAL SETTLED DISTRICTS</td>
<td>11,146</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Notes to Tables A and B.

a. Total of Cumberland Plain census districts: Airds and Appin, Bringelly and Cooke, Liverpool Town and District, Parramatta Town and District, Penrith, Sydney Town and District, and Windsor Town and District.

b. Includes Wellington Valley

c. Includes Manning River 11: 4 came free, 3 born in colony, and 4 free by servitude.

d. Includes 7 in penal and distant settlements and 753 in the colonial marine.
### Table A: Area Held and Cultivated, and Number of Livestock on Holdings by Size of Holdings

<table>
<thead>
<tr>
<th>Size of Holding</th>
<th>No. of Farms</th>
<th>Area Held</th>
<th>Area Cultivated</th>
<th>% of Area Held Cult.</th>
<th>Cattle</th>
<th>Sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Acres</td>
<td>Acres</td>
<td></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>1-19</td>
<td>9</td>
<td>73</td>
<td>70</td>
<td>95.8</td>
<td>118</td>
<td>-</td>
</tr>
<tr>
<td>20-49</td>
<td>13</td>
<td>362</td>
<td>205</td>
<td>56.6</td>
<td>77</td>
<td>-</td>
</tr>
<tr>
<td>50-99</td>
<td>14</td>
<td>854</td>
<td>283</td>
<td>33.1</td>
<td>703</td>
<td>311</td>
</tr>
<tr>
<td>100-199</td>
<td>36</td>
<td>1,289</td>
<td>558</td>
<td>43.2</td>
<td>898</td>
<td>2.9</td>
</tr>
<tr>
<td>100-199</td>
<td>19</td>
<td>2,397</td>
<td>708</td>
<td>29.7</td>
<td>1,761</td>
<td>1,359</td>
</tr>
<tr>
<td>200-499</td>
<td>17</td>
<td>4,770</td>
<td>651</td>
<td>13.6</td>
<td>3,206</td>
<td>700</td>
</tr>
<tr>
<td>500-999</td>
<td>28</td>
<td>18,585</td>
<td>684</td>
<td>3.6</td>
<td>3,286</td>
<td>1,747</td>
</tr>
<tr>
<td>100-999</td>
<td>64</td>
<td>25,752</td>
<td>2,043</td>
<td>24.3</td>
<td>8,253</td>
<td>26.8</td>
</tr>
<tr>
<td>1000-1999</td>
<td>28</td>
<td>37,120</td>
<td>1,256</td>
<td>3.3</td>
<td>4,625</td>
<td>10,846</td>
</tr>
<tr>
<td>2000-2999</td>
<td>40</td>
<td>89,590</td>
<td>2,243</td>
<td>2.5</td>
<td>8,373</td>
<td>16,565</td>
</tr>
<tr>
<td>3000-4999</td>
<td>10</td>
<td>39,230</td>
<td>1,210</td>
<td>3.0</td>
<td>3,329</td>
<td>9,177</td>
</tr>
<tr>
<td>5,000 +</td>
<td>13</td>
<td>123,900</td>
<td>1,105</td>
<td>0.8</td>
<td>5,357</td>
<td>27,083</td>
</tr>
<tr>
<td>1,000 +</td>
<td>91</td>
<td>269,840</td>
<td>5,614</td>
<td>69.1</td>
<td>21,684</td>
<td>70.3</td>
</tr>
</tbody>
</table>

**TOTAL** 191 316,881 100.0 8,415 100.0 2.6 30,835 100.0 67,788 100.0

**CENSUS TOTAL** a 1,537,488 11,348 0.7 46,805 119,391

**TOTAL AS % OF CENSUS FIGURE** (20.6 b 74.1 65.8 56.77

---

Notes to this Table on next page.
Appendix 14.

NOTES TO TABLE A.

a  "Census Total" from the "Amended Return of Land Granted, Cleared, Cultivated, and of Livestock, as shown by the Census...1828": N.S.W. Returns 1828, p. 200.

b  The Census figure of 1,537,488 acres for the total area held in the valley apparently includes the 1,000,000 acre grant made to the Australian Agricultural Company. If the 1,000,000 is subtracted and the total taken to be 537,488 acres (a figure in keeping with the previous Returns), the area of the 191 farms constitutes 58.5% of the area held.
Appendix 14.

<table>
<thead>
<tr>
<th>Status</th>
<th>Size of Holding (Acres)</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Stated</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Came Free:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No date</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Pre 1821</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1821-5</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>1826-8</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total Came Free</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Born in N.S.W.</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Ex-convict</td>
<td>8</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Convict (T of L)</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>9</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>%</td>
<td>4.7</td>
<td>6.8</td>
<td>7.3</td>
</tr>
<tr>
<td>Married</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>
### Table C: Size of Holding and Area Cultivated

| Area Cultivated (Acres) | Size of Holding (Acres) | Total | %
|-------------------------|-------------------------|-------|---
| 0                       | - 1 - 1 1 6 7 6 - 3 | 25   | 13.0 |
| 1-9                     | 7 2 3 - 1 5 - 3 | 21   | 10.9 |
| 10-19                   | 2 5 4 2 2 4 5 1 - | 25   | 13.6 |
| 20-49                   | - 5 7 11 9 9 7 11 2 3 | 64   | 33.4 |
| 50-99                   | - - - 4 3 3 3 11 3 3 | 30   | 15.7 |
| 100-199                 | - - - 1 1 1 6 7 3 2 | 21   | 10.9 |
| 200-299                 | - - - - - - 1 1 1 | 3    | 1.5 |
| 300+                    | - - - - - - - 1 1 | 2    | 1.0 |
| **TOTAL**               | 9 13 14 19 17 28 28 40 10 13 | 191  | 100.0 |
Table D: Size of Holding and Number of Cattle

<table>
<thead>
<tr>
<th>Cattle (Head)</th>
<th>Size of Holding (Acres)</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2  5  -  1  -  2  2  -  -  -</td>
<td>12</td>
<td>6.3</td>
</tr>
<tr>
<td>1-9</td>
<td>3  4  2  3  1  1  -  1  -  -</td>
<td>15</td>
<td>7.8</td>
</tr>
<tr>
<td>10-19</td>
<td>2  3  1  1  1  1  1  -  -  -</td>
<td>11</td>
<td>5.8</td>
</tr>
<tr>
<td>20-49</td>
<td>2  1  5  5  3  5  1  4  -  -</td>
<td>26</td>
<td>13.7</td>
</tr>
<tr>
<td>50-99</td>
<td>-  -  5  6  3  8  5  11  -  -</td>
<td>38</td>
<td>19.9</td>
</tr>
<tr>
<td>100-199</td>
<td>-  -  1  1  5  7  10  9  3  2</td>
<td>38</td>
<td>19.9</td>
</tr>
<tr>
<td>200-499</td>
<td>-  -  -  1  2  2  7  10  5  7</td>
<td>34</td>
<td>17.8</td>
</tr>
<tr>
<td>500-999</td>
<td>-  -  -  1  2  2  2  3  2  4</td>
<td>16</td>
<td>8.3</td>
</tr>
<tr>
<td>1000+</td>
<td>-  -  -  -  -  -  -  1  -  -</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>9  13  14  19  17  28  28  40  10  13</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### Table E: Size of Holding and Number of Sheep

<table>
<thead>
<tr>
<th>Sheep (Head)</th>
<th>Size of Holding (Acre)</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9 13 13 17 15 22 10 20 5 1</td>
<td>125</td>
<td>65.6</td>
</tr>
<tr>
<td>1-19</td>
<td>- - - - - - - - - -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>20-49</td>
<td>- - - - - - 1 - -</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>50-99</td>
<td>- - - - - - 1 1 -</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>100-199</td>
<td>- - - - - 2 - -</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>200-499</td>
<td>- - 1 1 2 3 7 7 1</td>
<td>22</td>
<td>11.5</td>
</tr>
<tr>
<td>500-999</td>
<td>- - - 1 1 - 3 5 2 2</td>
<td>14</td>
<td>7.3</td>
</tr>
<tr>
<td>1000-1999</td>
<td>- - - - 2 5 1 3</td>
<td>11</td>
<td>5.8</td>
</tr>
<tr>
<td>2000-4999</td>
<td>- - - - 1 2 - 6</td>
<td>9</td>
<td>4.7</td>
</tr>
<tr>
<td>5000+</td>
<td>- - - - - - - 1</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>9 13 14 19 17 28 28 40 10 13</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Appendix 14.

Note on the Compilation and Reliability of these Tables

The volumes of the Census give the names of the colony's inhabitants in (approximately) alphabetical order. Beside each name is given the person's age, class (came free, free by servitude, born in colony, convict, conditionally pardoned convict, absolutely pardoned convict, holder of a ticket-of-leave), sentence if a convict or ex-convict, the name of the ship in which they came to N.S.W., the year of their arrival, their employment, place of residence, and holdings of land, of cleared and cultivated land, and of livestock. For all landholders naming a place of residence in any of the areas outside Cumberland, this data was extracted onto cards which were subsequently sorted according to their district and size of property. The foregoing tables were then compiled from the cards. Altogether, data for 191 settlers in the Hunter Valley, for 100 in the western districts, for 102 in the south-western districts, and for 46 in Illawarra, were used.

These 493 settlers are regarded as a fair sample of the resident settlers in the various districts, not the total number of settlers in those districts (the fact that their holdings account for only a proportion of the land held in each of the districts makes this obvious). Among those who are not included in this number are:

i. those who were named in the Census but for whom complete data was not given and who were therefore excluded from the compilation of the tables;

ii. those who were omitted from the Census - many settlers, whose names appear in lists of lands granted and in contemporary documents which contain references to their being resident in one or other of the districts, are not to be found in the Mitchell Library's transcript of the Census;

iii. those settlers who owned land in a number of districts, but who did not distinguish between their various holdings in the Census; (Where holdings in various districts have been given, they have been included in the compilation.)

iv. those settlers, of whom there was not many, giving a place of residence (generally merely a property name without a location) which could not be identified.
Despite these omissions, the figures are believed to give a reliable indication of the situation existing on the farms of resident settlers in the various districts. This belief is based on a comparison of the sample totals with those given in the Census abstracts in the N.S.W. Returns 1828 (see Table below) which shows:

i. that in the case of the Hunter River Valley and the Bathurst (western) district, the sample includes rather more than 50% of the land and stock held in those districts;

ii. that in the case of the south-western and south coast districts (which had to be combined to permit comparison) the proportion of the land and livestock held by settlers included in the sample varies only slightly from one category to another; the range is only from 36% to 41%.

In the case of the Hunter Valley, the proportion of the holdings of various sizes in the sample corresponded very closely with the size distribution of the holdings listed in Dangar's Index and Directory.... This comparison is made in the text of Chapter 5.

Comparative Table of Census and Sample Totals

<table>
<thead>
<tr>
<th></th>
<th>Hunter Valley</th>
<th>Bathurst</th>
<th>South-west &amp; S. Coast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land Held (acres)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Census</td>
<td>537,488</td>
<td>294,486</td>
<td>494,929</td>
</tr>
<tr>
<td>B. Sample</td>
<td>316,863</td>
<td>184,164</td>
<td>183,749</td>
</tr>
<tr>
<td>B. as % of A.</td>
<td>58.5</td>
<td>62.5</td>
<td>37.1</td>
</tr>
<tr>
<td><strong>Land Cultivated (acres)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Census</td>
<td>11,348</td>
<td>3,899</td>
<td>6,597</td>
</tr>
<tr>
<td>B. Sample</td>
<td>8,415</td>
<td>2,691</td>
<td>2,716</td>
</tr>
<tr>
<td>B. as % of A.</td>
<td>74.2</td>
<td>69.0</td>
<td>41.3</td>
</tr>
<tr>
<td><strong>Cattle (head)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Census</td>
<td>46,805</td>
<td>49,290</td>
<td>86,454</td>
</tr>
<tr>
<td>B. Sample</td>
<td>30,835</td>
<td>24,463</td>
<td>35,180</td>
</tr>
<tr>
<td>B. as % of A.</td>
<td>65.9</td>
<td>49.6</td>
<td>40.7</td>
</tr>
<tr>
<td><strong>Sheep (head)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Census</td>
<td>119,391</td>
<td>165,786</td>
<td>162,107</td>
</tr>
<tr>
<td>B. Sample</td>
<td>67,788</td>
<td>93,231</td>
<td>58,509</td>
</tr>
<tr>
<td>B. as % of A.</td>
<td>56.5</td>
<td>56.2</td>
<td>36.1</td>
</tr>
</tbody>
</table>

* Excluding the Australian Agricultural Company's grant of 1,000,000 acres.
Appendix 15.

OCCUPIED LAND IN THE HUNTER VALLEY, 1829.

Table A: Lands Granted and Leased during 1829
(By Counties)

<table>
<thead>
<tr>
<th></th>
<th>Brisbane</th>
<th>Durham</th>
<th>Gloucester</th>
<th>Hunter</th>
<th>Northumberland</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Granted&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granted to E. &amp; S. Corporation&lt;sup&gt;b&lt;/sup&gt;</td>
<td>8,255</td>
<td>66,493</td>
<td>170,560</td>
<td>710</td>
<td>50,556</td>
<td>296,574</td>
</tr>
<tr>
<td>Granted to Settlers&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leased to Settlers&lt;sup&gt;d&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Occupied by Settlers</td>
<td>29,035</td>
<td>122,560</td>
<td>9,600</td>
<td>10,710</td>
<td>96,194</td>
<td>268,099</td>
</tr>
</tbody>
</table>

b. From "Return of Lands Granted to the Trustees of the Clergy and School Estate...1829": Ibid, unnumbered page facing p. 219.
c. Calculated by subtracting the area granted to the C. & S.E. from the total granted (in which it was included).
d. From Appendix 12, Table A.
Appendix 15.

Table B: Total Area Occupied in the Hunter Valley, 1829.

<table>
<thead>
<tr>
<th>Land Held by Settlers</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Granted pre 1829&lt;sup&gt;a&lt;/sup&gt;</td>
<td>537,488</td>
</tr>
<tr>
<td>Granted during 1829&lt;sup&gt;b&lt;/sup&gt;</td>
<td>81,449</td>
</tr>
<tr>
<td>Total Held under Grant</td>
<td>618,937</td>
</tr>
<tr>
<td>Leased&lt;sup&gt;c&lt;/sup&gt;</td>
<td>186,650</td>
</tr>
<tr>
<td>Total held by Settlers</td>
<td>805,587</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Lands</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Agricultural Company's Grant</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Clergy and School Estate</td>
<td>215,125</td>
</tr>
<tr>
<td>Total Area Occupied</td>
<td>2,020,712</td>
</tr>
<tr>
<td>Total Area Occupied in N.S.W.&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3,353,684</td>
</tr>
</tbody>
</table>

---

<sup>a</sup> From "Amended Return of Land Granted...1828": N.S.W. Returns 1828, p. 200, but omitting the 1,000,000 acres granted to the Australian Agricultural Company.

<sup>b</sup> From Table A, previous page.

<sup>c</sup> From Table A, previous page.

<sup>d</sup> From Appendix 12, Table C.
Appendix 16.
THE WESTERN DISTRICTS, 1828.
An Analysis of Census Data

Table A: Area Held and Cultivated, and Number of Livestock on Holdings by Size of Holdings

<table>
<thead>
<tr>
<th>Size of Holding</th>
<th>No. of Farms</th>
<th>Area Held Acres</th>
<th>Area Cultivated Acres</th>
<th>% of Area Held Cult.</th>
<th>Cattle Number %</th>
<th>Sheep Number %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-19</td>
<td>9</td>
<td>55</td>
<td>45</td>
<td>81.8</td>
<td>66</td>
<td>50</td>
</tr>
<tr>
<td>20-49</td>
<td>6</td>
<td>141</td>
<td>40</td>
<td>28.4</td>
<td>262</td>
<td>508</td>
</tr>
<tr>
<td>50-99</td>
<td>8</td>
<td>645</td>
<td>156</td>
<td>24.2</td>
<td>403</td>
<td>2,170</td>
</tr>
<tr>
<td>1-99</td>
<td>23</td>
<td>841</td>
<td>241</td>
<td>28.6</td>
<td>731</td>
<td>3.0</td>
</tr>
<tr>
<td>100-199</td>
<td>7</td>
<td>785</td>
<td>298</td>
<td>38.0</td>
<td>530</td>
<td>1,769</td>
</tr>
<tr>
<td>200-499</td>
<td>7</td>
<td>2,115</td>
<td>71</td>
<td>3.4</td>
<td>1,178</td>
<td>2,843</td>
</tr>
<tr>
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a Census Total from the "Amended Return of Land Granted...1828": N.S.W. Returns 1828, p. 200.
For a comment on the compilation and reliability of these figures, see note at end of Appendix 14.
## Table B: Size of Holding and Status of Proprietor

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\(^a\) NLH = Non-landholders.
### Table C: Size of Holding and Area Cultivated

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<th>200-499</th>
<th>500-999</th>
<th>1000-2000</th>
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### Table D: Size of Holding and Number of Cattle

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<sup>a</sup> NLH = Non-landholders.
### Table E: Size of Holding and Number of Sheep

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<tr>
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<td>100</td>
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</table>

<sup>a</sup> NLH = Non-landholders.
## Appendix 17.

**THE SOUTH-WESTERN DISTRICTS, 1828**

An Analysis of Census Data for the Districts of Sutton Forest, Argyle, Goulburn Plains and St. Vincent.

Table A: Area Held and Cultivated, and Number of Livestock on Holdings by Size of Holdings

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<th>% of Area Held Cult.</th>
<th>Cattle Number</th>
<th>%</th>
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<td>%</td>
<td>%</td>
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Notes to this Table on next page.
Appendix 17.

NOTES TO TABLE A.

a In order to make a comparison between the sample and census figures, it is necessary to combine those of the Southern Tableland Districts with Illawarra so that the sample will correspond to the two census districts "Argyle and St. Vincent" and "Camden and Illawarra". For the Illawarra sample see Appendix 18.

b The total of "Argyle and St. Vincent" and "Camden and Illawarra" figures combined. From N.S.W. Returns 1828, p. 200.

For a comment on the compilation and reliability of the figures in Table A, see the note at the end of Appendix 14.
### Table E: Size of Holding and Status of Proprietor

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<th>200-499</th>
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<th>4000-4999</th>
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<td>9.8</td>
<td>5.9</td>
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<td>13.7</td>
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<td>4.9</td>
<td>5.9</td>
<td>100.0</td>
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**Absentee**        | -    | -     | -     | -       | -       | 3       | 5         | 5         | 2          | -         | 15    |     |     |
**Married**          | 2    | 1     | 6     | 3       | 3       | 8       | 4         | 4         | 2          | 2         | 35    |     |     |

**NLH** = Non-landholders.
### Table C: Size of Holding and Area Cultivated

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<th>100-199</th>
<th>200-499</th>
<th>500-999</th>
<th>1000-1999</th>
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<th>3000-4999</th>
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<td>10</td>
<td>6</td>
<td>8</td>
<td>21</td>
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<td>19</td>
<td>5</td>
<td>6</td>
<td>102</td>
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Appendix 17.

### Table D: Size of Holding and Number of Cattle

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</tr>
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<tr>
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<tr>
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NLH = Non-landholders.
Table E: Size of Holding and Number of Sheep

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<td>1</td>
<td>0.9</td>
</tr>
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<td>20-49</td>
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<tr>
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<td>1</td>
<td>0.9</td>
</tr>
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<td>3.9</td>
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NLH = Non-landholders.
Table A: Area Held and Cultivated, and Number of Livestock on Holdings by Size of Holdings

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Note: As Illawarra was included in the Census with Camden, it is not possible to compare these figures with those of the Census Return. A comparison of the combined figures for Camden and Illawarra, and Argyle and St. Vincent from the 1828 Census and the Census Return in the N.S.W. Returns 1828 is made in Appendix 17.
### Table B: Size of Holding and Status of Proprietor

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Appendix 18.

**Table C: Size of Holding and Area Cultivated**

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### Table D: Size of Holding and Number of Cattle

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<th>1000-1999</th>
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Appendix 18.
The bibliography is arranged as follows:-

I Theoretical discussions of Geography and Historical Geography.

II Geographical Works
   A. General Works
   B. Physiography and Geology
   C. Climate
   D. Vegetation and Soils

III Historical Sources
   A. Published Sources
      i Collections of Contemporary Documents
      ii Contemporary Publications
      iii Contemporary Newspapers and Periodicals
      iv Government Reports
      v Contemporary Periodical Articles
      vi Modern Books
      vii Modern Periodical Articles
   B. Manuscript Sources
      i Official Papers
      ii Individual Documents
      iii Collections of Documents
I. THEORETICAL DISCUSSIONS OF GEOGRAPHY AND HISTORICAL GEOGRAPHY.

A. Books

Broek, J.O.M.: The Santa Clara Valley, California: A Study in Landscape Changes. (University, Utrecht, 1932) [Especially the Introduction].


B. Periodical Articles


Baker, J.N.L.: The Development of Historical Geography in Britain During the Last Hundred Years: Advancement of Science, viii (1952), 408-412.


East, W.G.: A Note on Historical Geography: Geography xviii (1933), 282-92.


Spate, O.H.K.: The Rationale of Modern Geography: Gazette of the University of Western Australia, iv (1954), 1-4.


C. Other Papers

Spate, O.H.K.: The Nature of Historical Geography. An address delivered to the Research Group of the N.S.W. Geographical Society, 12 March 1952 (Roneoed and circulated by the Society).
II. GEOGRAPHICAL WORKS

A. General Works


Australian & New Zealand Association for the Advancement of Science, Handbook for New South Wales (Sydney, 1932).

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New South Wales, Premier's Department, Preliminary Survey of Resources for the following regions: Oxley, Upper Hunter, Newcastle, Illawarra, Monaro-South Coast, Macquarie, Namoi, and Southern Tablelands (Govt. Printer, Sydney, various dates).


The Australian Environment (CSIRO, Melbourne, 1950).
E. Physiography and Geology


The abbreviations used in the following references are:


C. Climate

Australia, Commonwealth, Bureau of Meterology, Results of Rainfall Observations in New South Wales (Melbourne, 1948). For Rainfall and temperature data.


D. Vegetation and Soils


Blakely, W.F.: A Key to the Eucalypts (Forestry & Timber Bureau, Canberra, 1955).


Brown, Robert: General Remarks, Geographical and Systematical, on the Botany of Terra Australis: (Bulmer & Co, London, 1814).


Fraser, L. & Vickery, J.W.: The Ecology of the Upper Williams River and Barrington Tops Districts, 3 parts: L.S.N.P. lxii (1937), 269-83; lxiii (1938), 139-84; lxiv (1939), 1-33.


Jensen, H.I.: Soils in Relation to Geology and Climate (Dept. Agriculture, Scientific Bulletin No 1, Sydney, 1911).

Jensen, H.I.: The Soils of New South Wales (Govt Printer, Sydney, 1914).


Pidgeon, Ilma M.: The Ecology of the Central Coastal area of N.S.W., 4 parts: L.S.N.P. lxii (1937), 315-40; lxiii (1938), 1-26; lxv (1940), 221-49; lxvi (1941), 113-37.
III HISTORICAL SOURCES

A PUBLISHED SOURCES

i Collections of Contemporary Documents

Historical Records of Australia [H.R.A.]
(National Library, Canberra):
Series I, Governor's Despatches, 1788-1848, 26 volumes.
Series III, Settlement of the States, 1803-29, 6 volumes.
Series IV, Legal Papers, 1786-27, 1 volume.

Historical Records of New South Wales
[H.R.N.S.W.] (8 volumes, Government Printer, Sydney): Governor's Despatches together with extracts from other contemporary sources (letters, periodicals, newspapers). The documents have in many cases suffered in editing and in general the H.R.A. has been preferred to the H.R.N.S.W. which do, however, contain some documents not readily available elsewhere.

Macquarie, Lachlan: Journals of His Tours in New South Wales and Van Diemen's Land, 1810-22 (N.S.W. Public Library, Sydney, 1956).


ii Contemporary Publications

Agricultural Society of N.S.W.: First Anniversary Address... by Mr Justice Barron Field, President (Howe, Sydney, 1823).

Agricultural Society of N.S.W.: Second Anniversary Address... by Rev Samuel Marsden, Vice-President (Howe, Sydney, 1824).
Agricultural Society of N.S.W.: Third Anniversary Address... by Sir John Jamison, President (Cubitt, Sydney, 1826).

Agricultural Society of N.S.W.: Fourth Anniversary Address... by Sir John Jamison, President (Cubitt, Sydney, 1827).

Agricultural and Horticultural Society of N.S.W.: Report...1829, including address by Sir John Jamison, President (Mansfield, Sydney, 1829).


Atkinson, James: On the Expediency and Necessity of Encouraging Distilling and Brewing from Grain in New South Wales... (Mansfield, Sydney, 2nd ed 1829).

Bennet, H. Grey: A Letter to Earl Bathurst... on the Condition of the Colonies in New South Wales and Van Diemen's Land... (Ridgeway, London, 1820).


[Broughton, W.G.]: A Form of Prayer with Thanksgiving to be used on Thursday, November 12, 1829, in all Churches and Chapels of the Establishment throughout New South Wales... (Mansfield, Sydney, 1829).

Broughton, W.G.: The Counsel and Pleasure of God in the Vicissitudes of States and Communities. A Sermon preached in the Church of St James, Sydney, on Thursday, November 12, 1829... (Mansfield, Sydney, 1829).


Cunningham, Peter: *Two Years in New South Wales* (Colburn, London, 2 vols 1827, 1828).


Flinders, Matthew: *A Voyage to Terra Australis...* (Nicol, London, 2 vols and atlas 1814).


Hunter, John: *An Historical Account of the Transactions at Port Jackson and Norfolk Island...* (Stockdale, London, 1793).


N.S.W. Colonial Secretary: The Colony of New South Wales For the Year 1828 (Howe, Sydney, 1829). A printed copy of the "Blue Book" for 1828.

Oxley, John: Journals of Two Expeditions into the Interior of New South Wales... (Murray, London, 1820).

[Phillip, Arthur]: The Voyage of Governor Phillip To Botany Bay... compiled from authentic papers... (Stockdale, London, 1789).

Reid, Thomas: Two Voyages to New South Wales and Van Diemen's Land... (Longman et al, London, 1822).

Slater, John: A Description of Sydney, Parramatta, Newcastle, etc, Settlements in New South Wales... (Sutton & Sons, Nottingham, 1819; republished with an introduction by Douglas Pike in the Proceedings of the Royal Geographical Society of Australasia (S.A. Branch) liii (1952), 53-64.

Sturt, Charles: Two Expeditions into the Interior Of Southern Australia... (Smith Elder, London, 2 vols, 2nd ed 1834).

Tench, Watkin: A Narrative of the Expedition to Botany Bay... (Debrett, London, 1789).


**iii Contemporary Newspapers and Periodicals**

*The Sydney Gazette* published weekly from 5th March 1803, but publication was suspended from 20 August 1807 until 15 May 1808.

*The Australian* published weekly from 14 October 1824.

*The Monitor* published weekly from 19 May 1826.

*The New South Wales Pocket Almanac*, annual (Howe, Sydney, 1806-21 except 1807).

*The Australian Pocket Almanac*, annual (Howe, Sydney, 1822-35).

*The Australian Magazine*, quarterly (Howe, Sydney, 1 volume, 1821).

The Blossom, Quarterly Magazine, edited by John Walker Fulton, 1 number only, (May 1828) published by A. Hill, Sydney.

The South Asian Register, edited by Rodger Oldfield, 4 numbers published (October 1827 and January, April and December 1828).

[These periodicals contain useful "Agricultural Reports", descriptions of explorations, essays etc.

The following should be noted:--
Agricultural Reports in Blossom, 1828, pp.81-2; South Asian Register, pp. 89, 174 & 281.

iv Government Reports


Report of the Select Committee of the House of Commons, appointed to Inquire into the State and Description of Gaols and other Places of Confinement... dated 12 July 1819 (printed 1820). [Transcript of evidence particularly useful].

v Contemporary Periodical Articles


vi Modern Books


Back to Shoalhaven Week Committee: The Book of Shoalhaven, As it was and as it is (Mortons, Sydney, 1926).


Bayley, W.A.: Kangaroo Valley, New South Wales (Kangaroo Valley Historical Committee, 1953).

Berry, Alexander: Reminiscences of Alexander Berry (Angus & Robertson, Sydney, 1912).


Evatt, H.V.: Rum Rebellion (Angus & Robertson, Sydney, 1947).

Favenc, E.: The Explorers of Australia... (Whitcombe & Tombs, Christchurch, 1908).


Gale, John: Canberra, History and Legends (Fallick, Queanbeyan, 1927).


Hancock, W.K.: Australia (Benn, London, 1930).

Kiernan, T.J.: Transportation from Ireland to Sydney, 1791-1816.

Kiernan, T.J.: Irish Exiles in Australia.


Robinson, F.W.: **Canberra's First Hundred Years and After** (Penfold, Sydney, 2nd ed 1927).


Watson, Fredrick: **A Brief History of Canberra...** (Capital Press, Canberra, 1927).


Modern Periodical Articles


Jervis, James: Jervis Bay, its Discovery and Settlement: R.A.H.S.J. xxii (1936), 118-34.


Jervis, James: Cedar and the Cedar Getters: 
R.A.H.S.J. xxv (1939), 131-56.


Jervis, James: The Route to the North: R.A.H.S.J. xxvi (1940), 515-8: xxvii (1941), 437-44.


Jervis, James: Solomon Wiseman and His Ferry: 


Jervis, James: William Lawson, Explorer and Pioneer: 

King, C.J.: The First Fifty Years of Agriculture in New South Wales: Review of Marketing and Agricultural Economics, xvi (August 1948) to xvii (December 1949) sixteen articles.


B. MANUSCRIPT SOURCES

Unless otherwise stated, all documents listed are in the Mitchell Library, Sydney.

i Official Papers

New South Wales Colonial-Secretary's In-letters
[C.S.I.L.] contain the letters, memorials, reports, memoranda, etc addressed to the Governor and Colonial-Secretary. They often bear a note of the reply given. Letters were numbered in order of receipt, and the letters for a year, or those relating to a specific topic, tied in bundles. The bundles for the years prior to 1826 have been broken up, the letters partly classified and bound into volumes. The letters for years after 1826 are still in their original bundles. The letters for the period 1815-26 are contained in volumes:—

56 volumes of unclassified letters. The footnote references to these volumes give the number of the bundle and the numbers of the letters from that bundle which it contains. Thus C.S.I.L. 10(1-29), means the volume containing letters numbered 1 to 29 from Bundle 10. In some cases the pages are numbered and a page reference is given, but as in each volume the documents are arranged in chronological order of writing, documents are easily found even though the pages are not numbered.

9 volumes of documents relating to Newcastle. References are given: C.S.I.L. Newcastle (10-12), which indicates the volume containing letters referring to Newcastle from Bundles 10, 11 and 12.

4 volumes containing documents relating to Bathurst.

1 volume of letters written to, or by, the Surveyor-General, John Oxley, 1810-26.
The letters for the years 1826 to 1829 are still in their original bundles:
1826, 83 bundles.
1827, 34 bundles.
1828, 24 bundles.
1829, 23 bundles.

New South Wales Colonial-Secretary's Letters to Miscellaneous Persons [O.S.L.M.P.]
Volumes containing the Governor's and Colonial-Secretary's replies to correspondents. The letters were written into books in the order of their despatch. The letters are therefore arranged in chronological order of writing. In some volumes they are numbered, and in others references are given by page number. The references to individual volumes give the period covered in months and years: eg, October 1825-May 1826.

New South Wales Colonial-Secretary's Abstract of Monthly Leases 1st February 1829 to 31st July 1831 - a list of the leases of Crown Land made under the Government Order of 16 October 1828.


New South Wales Returns or "Blue Books" - annual volumes of statistics. 1824 wanting.


Letters from Government Officers (M.L. A664).

Lands Department Papers (M.L. A1651-5) 5 vols of descriptions of grants of lands.
List of Grants and Leases of Land 1788-1809 (M.L. A1840).

Surveyor's Field Books, notes, observations and, sometimes, sketches made in the course of exploratory journeys and the measurement of land grants.


Church and School Corporation, Paterson's Plains, 1827-31, letters, memorials, reports, etc re the land occupied by small farmers at Paterson's Plains and subsequently granted to the Corporation. (M.L. A1555).

Bonwick Transcripts [B.T.] boxes of manuscript copies of documents relating to Australia. Boxes 1-36 contain a transcript of the evidence given before Commissioner Bigge, and of Bigge's correspondence.

ii Individual Documents Cited

Berry, Alexander: Diary of an Expedition to Shoalhaven River, June 21 - July 23, 1822 (M.L. B897).


Cox, G.: Journal kept on... tour Northward and Eastward of Bathurst...Nov-Dec 1821 (M.L. A1545).

[Evans, G.W.]: Anonymous Journal of an Expedition Overland from Jervis Bay to Broughton's Farm near Appin, March 25 - April 17 [1812], attributed to G.W. Evans (M.L. C709).


Lawson, W.: Tour from Bathurst to Liverpool Plains (M.L. C120).


Meehan, J.: Memorandum and Remarks on a Tour to try if a communication can be effected from Sydney to Jervis Bay by land, 1818. (M.L. C90).

iii Collections of Documents

Documents from the following collections of papers have been used:-

Banks Papers.

Berry Papers, 31 vols (M.L. Uncat Ms 315).

Berry Estate Papers, 3 vols.

Cunningham, A: Correspondence with the Governor 1817-21 (M.L. A1749).

Cunningham, A: Journal, 1822 – February 1831 (M.L. A1745).

Elyard Papers (M.L. A2889).

M. Hindmarsh Papers (M.L. A3164).


Letters of Governor Hunter, 1795-1802 (M.L. A1787).


Memoranda 1808-14 (M.L. A772).

Papers 1809-21 (M.L. Safe 15).

Letterbooks 1809-21, 2 vols (M.L. A3250-3251).

Diary 1816-18, 1818-22, 1822-3, 1824, 6 vols, (M.L. A773-6).


Diaries, 89 vols (M.L. C1-C89).

Memoranda 1826-7 (M.L. C37).

Memoranda 1827-9 (M.L. C38).

Field Books, 7 vols (M.L. C40-46).


Throsby Papers 1810-21 and 1822-4, 2 vols (M.L. A1940-1).

**KEY TO THE PUBLISHED SHEETS OF THE**

**AUSTRALIAN MILITARY SURVEY: ZONE 8**

1 : 63,360.

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KEY TO THE PUBLISHED SHEETS
AUSTRALIAN MILITARY SURVEY
1:63,360-ZONE 8

NEW SOUTH WALES
THE NINETEEN COUNTIES

Boundary of Nineteen Counties:
Contoured Sheets:
Uncontoured Sheets (Emergency Eid.)
See Table for Names of Map Sheets.

Map 17.