GRAHAMSTOWN AND ITS ENVIRONS

EDITED BY

J. B. Mc I. DANIEL

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PREFACE

The aim of this brochure is to provide a reasonably comprehensive guide to Grahamstown and its environs. The area has much to offer the person who is prepared to explore and to observe the many facets offered by the human and physical landscapes. It is hoped that the sections on the development of the town and selected historical aspects, the geology, the vegetation, the mammals and the birds will provide sufficient information for the region to be seen and appreciated as a whole, while still leaving room for new discoveries. The interrelationships between geology, altitude, vegetation and the use of the land form a valuable starting point in the study of the countryside. In the towns the buildings and the street grids often help to unravel complex aspects of growth and development. These are some of the features which can be observed on the recommended excursion routes. If the brochure contributes to a greater understanding, and therefore appreciation, of Grahamstown and its environs its purpose will have been fulfilled.

J. B. McI. Daniel

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ACKNOWLEDGMENTS

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(1) There is no accompanying route guide for Figure 10 as this region of "Settler Country" is already very well documented, for example, in the publications of the 1820 Settlers National Monument Foundation.

GRAHAMSTOWN: DEVELOPMENT AND RELATED PROBLEMS

J.B.McI. Daniel

Grahamstown owes its existence to a decision by the Governor of the Cape Colony, Sir John Cradock,to establish a military post near the Great Fish river which had become the frontier with the Xhosa after the 1811-1812 war. Grahamstown, which dates from August 1812, was located by and named after Col. John Graham who selected the site for strategic reasons including the availability of water from a number of small streams. The first military post was placed on a spur between two streams, a type location frequently favoured by both Dutch and British settlers. (Pietermaritzburg, founded by the Voortrekkers, is also located on a spur.) In Grahamstown High Street follows the spur which is clearly seen at the Hill Street intersection.

Figures 1-3 depict the growth of Grahamstown between 1814 and 1824. Early growth was slow. In 1815 some 33 erven had been surveyed. In 1819 when the Xhosa prophet and leader, Makana, attacked Grahamstown there were thirty-two civilian men capable of assisting the military forces and by this time there were only 25 houses in the town or village, as it still was. It was only after the failure of several farming enterprises and the devastating floods of 1823 that many 1820 Settlers gravitated to Grahamstown which had become the capital of the Albany District in 1822. By May 1823 it is estimated that some 56% of the adult males had severed their links with their farms. The movement of traders, artisans and professional men to Grahamstown stimulated its development. Within the next ten years Grahamstown had become the main town of the Eastern Cape and the second most important town in the Cape Colony. Ivory and skins were especially important items of trade. By 1830 there were some 400 houses in the town and many new streets such as New, Hill, Bathurst, African, Dundas, Worcester, Somerset, Beaufort and Market Streets had been laid out. In 1834 the population of Grahamstown was estimated at 3 500. The 1970 preliminary population statistics for Albany District and Grahamstown are contained in Table 1.

Between 1823 and 1850 Grahamstown prospered as a trading centre and a military post. When in 1850 the Kei river became the boundary of the Cape Colony the military importance of Grahamstown began to decline. Ironically the identification in Grahamstown in 1867 of the first diamond discovered in South Africa contributed further to the decline of the city. The opening of the diamond fields helped to deprive Grahamstown of its important commercial function. The economic focus in South Africa was moving to the area above the escarpment, to Kimberley and later to Johannesburg, and Grahamstown was not even on a direct railway line from Port Elizabeth to these developing regions. Grahamstown has continued as a local centre for the farming community and from the mid 19th century education and law took the place of commerce and the military as the main functions of the town. The establishment of Grahamstown as the seat of the Eastern Districts Supreme Court in 1864

ensured that the town developed as a legal centre. By 1876 five major schools had opened in the town - the Assumption Convent, St. Andrew's College, Graeme College, the Diocesan School for Girls and St. Aidan's College. The Victoria Girls' High School, Kingswood College and the Teachers' Training College were also established before the turn of the century. Rhodes University College was founded in 1904 and P. J. Olivier Hoërskool opened in 1956.

The early introduction of merino sheep brought much needed stability to the farming community. Beef and dairy cattle have also been successfully introduced into the area. The coastal region provides good all year grazing and as a consequence of this produces excellent beef cattle. Proximity to Port Elizabeth has stimulated the growth of the dairy industry in the district of Alexandria. The main cash crops include pineapples, chicory and citrus. Inland, stock farming, especially cattle ranching, predominates. In the river valleys where fertile alluvial soils occur irrigation farming is practised. The emphasis is on citrus and fodder crops, but with the growth of Port Elizabeth and East London it is possible that the demand for milk, vegetables and fruit will result in a more intensive form of land use. In a memorandum from The South Eastern Areas Public Bodies Association to the Water Planning Commission in 1967 it was stated that 1 537 morgen were under irrigation in the lower Fish valley; that a further 11 507 morgen could easily be brought under irrigation; and that further irrigation possibilities existed for 12 500 morgen. There is a strong case for the lower reaches of the Fish river being included as a vital development region within the Orange River Project.

Grahamstown's geographical position lies at the root of many of the town's present day problems. Located between two coastal metropolitan centres it is difficult for the town to develop other functions. The road distance to East London is nearly 200 km, that to Port Elizabeth 130 km; there is no direct rail connection with East London and Grahamstown is only served by a branch line from Alicedale. In terms of natural resources which could form the basis of processing industries Grahamstown is not richly endowed. A citrus packing shed has recently been forced to close down for economic reasons, and the pineapple crop is processed mainly in East London. Kaolinite is used by potteries in the town and the local clay soils form the basis of a brickworks. In general industrial enterprises suffer by being distant from the main market centres of the Republic. At a National Development Foundation Conference held at the beginning of 1974, attention was drawn to the fact that Port Elizabeth and Uitenhage were overdependent on the motor industry; and that the rate of economic growth in the hinterland was below that of the national average. Therefore, Grahamstown's economic growth is also adversely affected by economic conditions presently prevailing in Port Elizabeth.

A further set of problems is created by the fact that Grahamstown has recently lost ground in both of its special functions. Three years before its centenary St. Aidan's College closed at the end of 1973. After more than eighty years of service to education the Training College will close in 1975. These closures are counterbalanced to some extent by the increasing number of students at Rhodes University. The legal role of Grahamstown is being diminished. The High Court

of the Transkei, established in August 1973, has reduced the area of jurisdiction of the Eastern Cape division of the Supreme Court. The establishment of a local division of the Supreme Court in Port Elizabeth at the beginning of 1974 must reduce the work done in Grahamstown even though the area of jurisdiction remains unchanged as a result of this development. There is indeed a need for strengthening the existing functions of the town as well as for seeking new growth points for future development.

Other problems facing Grahamstown concern the growth of the non-white population and water supplies.

Between 1951 and 1970 the African population more than doubled, increasing from 11 800 to 25 500. The rise in numbers is due both to a high rate of natural increase (in spite of the often high rate of infant mortality which is greater than 150/1000 in many years) and to an influx of Africans from surrounding areas - a movement related to the hope rather than the certainty of employment. The growth of the African population manifests itself in problems of unemployment and inadequate housing.

During 1973 the numbers of registered unemployed Africans per month fluctuated around 800 males and 3 500 females. The fact that approximately two-thirds of the unemployed males and half of the unemployed females were under the age of 35, underlines the problems of employment amongst the increasing number of people entering the economically active age group.

All municipal housing schemes for Africans in Grahamstown were stopped after 1966 when the Bantu Affairs Department announced its intention of starting a settlement at Committees Drift. The overcrowding in the African townships has reached very serious proportions. In the City of Grahamstown newsletter No 2/1972 the Town Clerk pointed out that there are instances where up to seventy people live on one erf and twenty to thirty people in one three-roomed house. In the Mayor's minute of the year September 1972 to August 1973 it was estimated that an additional three thousand houses were needed for the African population. Special representation to the authorities has resulted in a limited number of houses being built for the African population since 1972. The Regional Bantu Administration Board took over control of the Bantu Group Area from the Municipality in July 1973, but a solution to the housing problem has not been found as yet. When the Committees settlement is started it could be a solution provided that industries and other openings for work in both the primary and tertiary sectors are created, ab initio, and provided that it was primarily the unemployed who moved there.

Grahamstown situated in the headwater reaches of the Bloukrans river and in a region characterized by small catchments, suffers from periodic droughts and consequent water shortages. During 1973 for example the water stored in the four main reservoirs supplying the town, Milner, Jameson, Howisonspoort and Settlers' Dam, dropped to 30% of the total storage capacity and at one stage the town's available water was reduced to approximately seven months' supply. The provision of unrestricted water at all times will undoubtedly prove costly. To

improve the water supply through short term measures such as the sinking of boreholes, sewage reclamation and raising the wall of the main dam would cost over half a million rand. The cost of the long-term solution to the water problem, making use of water diverted from the Orange river into the Fish river, is estimated at between three and four million rand.

The problems facing Grahamstown provide a challenge to those who administer the affairs of the City. The challenge is made even more difficult by the fact that 49% of the property in Grahamstown is derated. It is no easy task to meet the needs of the community and balance the budget. Nevertheless, in spite of recent setbacks, there is every expectation that the educational and cultural role of Grahamstown can be strengthened through growth in the remaining institutions and the prospect that the town will become a major conference centre. Much can also be done to develop the farming potential of the region, and the tourist industry which is still in its infancy.

Table 1

a) Preliminary Population Statistics for 1970 : Albany

	Whites	Coloureds	Asians	Bantu	Total
Male	6 138	3 152	116	23 763	33 169
Female	6 284	3 541	126	26 607	36 558
Total	12 422	6 693	242	50 370	69 727
1960 Total	12 910	5 987	193	40 183	59 273

b) Preliminary Population Statistics for 1970 : Grahamstown

Whites	11 248
Bantu	25 517
Coloureds	4 877
Asians	242
Total	41 884

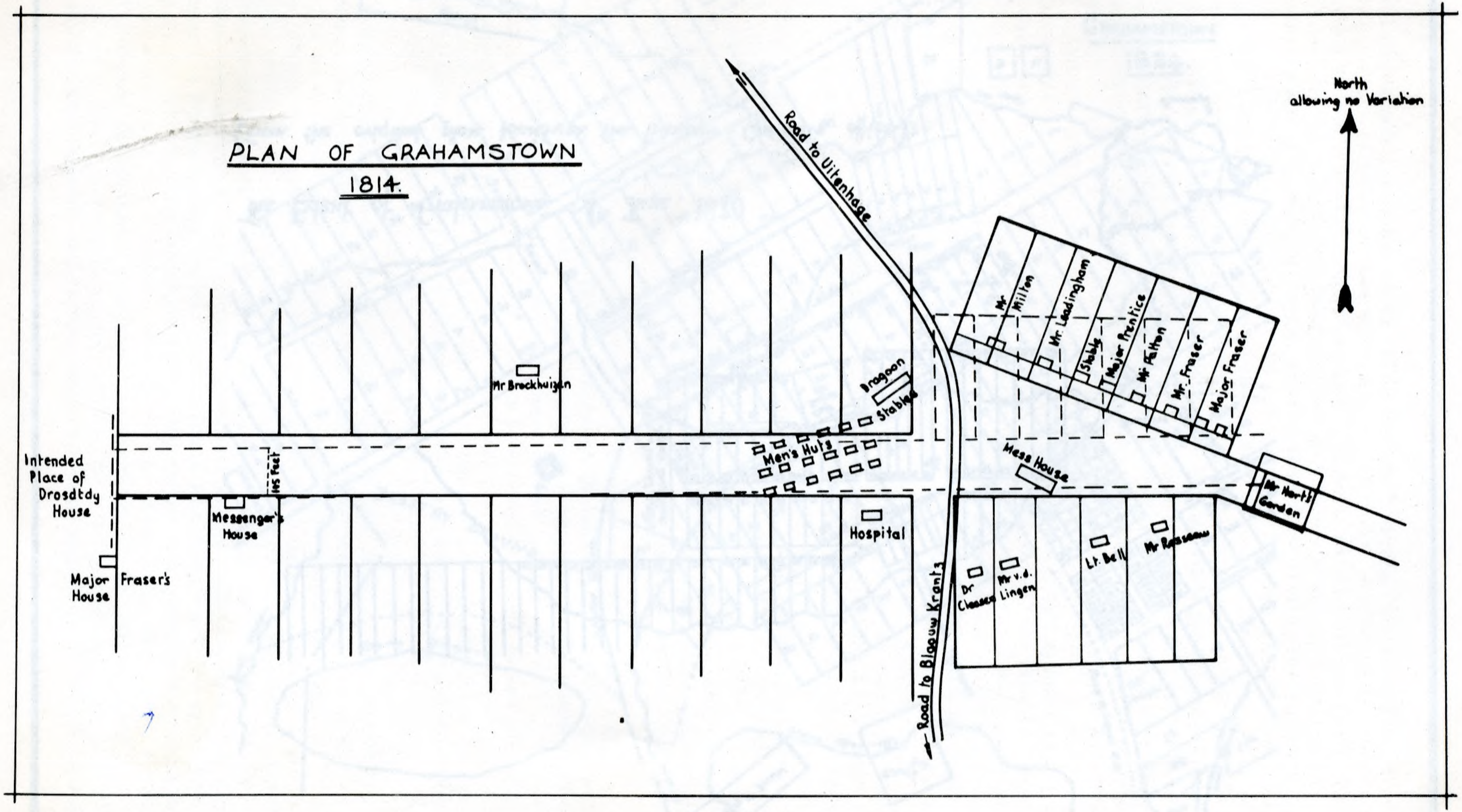
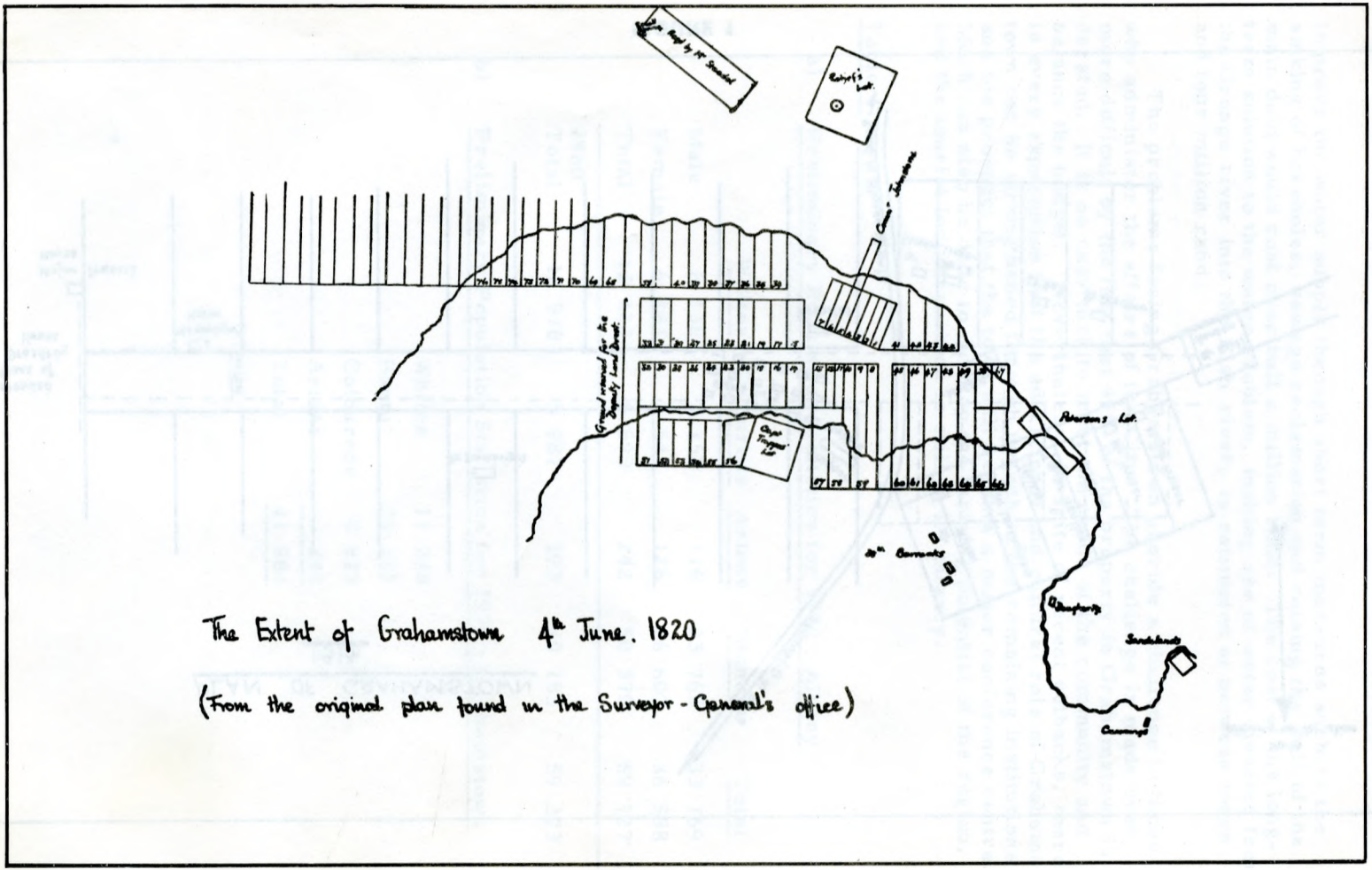

PLAN OF GRAHAMSTOWN
1814.
North
allowing no Variation
Road to Uitenhage
Road to Blaauw Krantz
Intended Place of Drosdtdy House
Major Fraser's House
Messenger's House
145 Feet
Mr Brockhuizen
Dragoon Stables
Men's Huts
Hospital
Mess House
Mr Milton
Mr Leadingham
Stable
Major Prentice
Mr Fraser
Major Fraser
Mr Hart's Garden
Dr
Mr v.d. Lingen
Lt. Bell

FIGURE 1



The Extent of Grahamstown 4th June. 1820

(From the original plan found in the Surveyor-General's office)

FIGURE 2

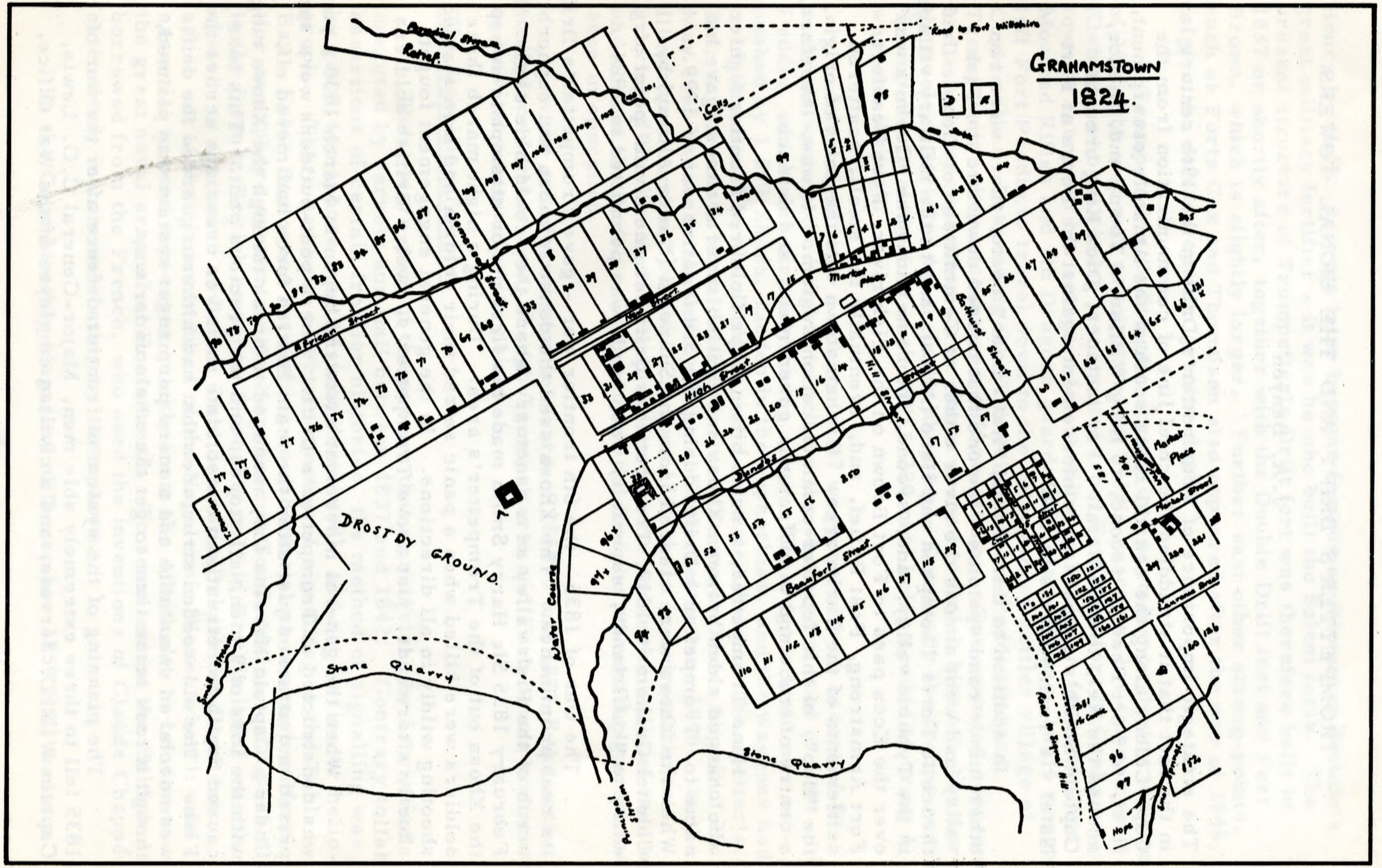

GRAHAMSTOWN
1824.
Road to Fort Willshire
DROSTDY GROUND.
Stone Quarry
Stone Quarry
Water Course
African Street
Somerset Street
New Street
High Street
Hill Street
Bathurst Street
Beaufort Street
Market place
Market Place
Market Street
Road to Settlers Hill
Small stream
Small Spring
Hope
Cells

FIGURE 3

TROMPETTER'S DRIFT AND THE SIGNAL TOWERS

J.A. Benyon

The strategic importance of Trompetter's Drift in the 19th century lay in the fact that it straddled the chief line of communication from the Cape Colony along the coastal route south of the Amatole escarpment, first, to Fort Peddie, second, to King William's Town, and, thence, across the Kei, toward Natal. For instance, Dick King brought Captain Smith's appeal for reinforcement against the Boers at Port Natal via Trompetter's in 1842.

In addition to this crucial "Kaffrarian" route, there were two other minor road systems - the one that passed down into the Fish valley and went across the river either at Committees or Double Drift, thence to Forts Thompson and Hare (Alice), and to the military villages in the Tyhume valley; and, second, the route along the "Queen's way" - over the Ecca pass to Fort Brown on the Fish river, Fort Beaufort, Fort Armstrong, Post Retief, and, eventually the small, scattered settlements of the Tarka area. Grahamstown was the point of origin, the "Hub", of this frontier communication system. It was, therefore, a centre of trade and manufacture, government, and defence.

Hans Trompetter, a hard-bitten Cape Coloured frontier fighter, who changed sides between Xhosa and British several times, gave his name to "Trompetter's Drift" during the 3rd frontier war of 1799. When the Xhosa were cleared from the Suurveld (Lower Albany) by Colonel Graham in 1812, Trompetter's Drift became a vital point of entry to "kaffirland", especially when trade was permitted in 1824.

The war of 1835 - the 6th frontier war - gave Trompetter's Drift its real prominence. The Xhosa used the dense mimosa and euphorbia scrub of the Fish valley as a sanctuary where they could hide cattle. In February 1835 Sir Harry Smith made his first major attempt to sweep the Xhosa out of the Trompetter's area. During a night march three soldiers were killed when a panic seized their column and men started shooting wildly in all directions. In the general engagement fought shortly afterwards, just above Trompetter's, twelve British soldiers fell.

When the general movement eastward began in March 1835 a pont was constructed at Trompetter's Drift. These pont-builders were surprised and attacked just after the main British force had moved off. Under a Captain Harries they managed to break through the Xhosa ring, with the loss of 9 men, all stores, and the precious pont. This loss caused Smith to retreat and consolidate the river crossings across the Fish. The old wooden structures that had hitherto guarded the drifts were declared unsuitable and a more permanent system was planned, though it took some time to get the whole under way.

The planning of the system of frontier defence after the war of 1835 fell to three extremely able men, Major-General C.G. Lewis, Captain W.F.D. Jervois, and a civilian employee of the War Office,

Henry L. Hall. Jervois later became famous as Victorian Britain's great military fortifier - it was he who built the Solent forts. The present structure of Trompetter's Drift fort was therefore built in 1837 or shortly after, together with the Double Drift fort and Fort Brown, which is slightly larger. Further east other strong-points, such as Forts Cox and Thompson also appeared after the war of 1846, to give the defence system greater depth.

Trompetter's Drift again sprang into prominence during the war of 1846 (the war was precipitated by Tola's rescue of his tribesman, Kleintje, who was being transported from Fort Beaufort to Grahamstown to carry out his sentence for stealing an axe). A force of Cape Mounted Rifles and 7th Dragoon guards (235 men, 2 guns, and 4 waggons) left Fort Peddie to travel down to the beleaguered settler village of Cuylerville. Descending the Fish heights from Peddie toward Trompetter's they encountered stiff resistance. One wounded sergeant had a lucky escape when three Xhosa rushed to finish him off, but were themselves stricken by accurate shooting. Eventually the troops reached Trompetter's at the foot of the hill - 200 men being needed to bring 4 waggons through!

A fortnight later a column of 47 waggons with an escort of 80 men was sent up the heights to relieve the shortage of food at Fort Peddie, which was virtually under siege. The waggon train was ambushed by 1 500 Xhosa, hidden in the euphorbias, and the waggons had to be abandoned by the soldiers, who retreated down to Trompetter's. But, in the event, Fort Peddie survived the major Xhosa attack of 28 May 1846 and was relieved by Colonel Somerset in June 1846. In the Illustrated London News of 22 August 1846 there is a dramatic engraving of the Xhosa driving plundered cattle under the walls of the fort and across the drift. On the top of the fort the traversing gun can be seen in operation.

In the subsequent frontier wars of 1850-3 and 1877-8 the action took place further east, though Trompetter's and Fort Brown continued to be vital communication points.

The Signalling Towers

These were part of the system that was devised by Lewis and executed by Jervois and Hall between 1837 and 1842. Contrary to the assertions of certain frontier histories, the method of signalling was by great semaphore masts (since destroyed), and not by fire or heliograph. There had been a certain amount of signalling in the Table Bay - False Bay areas but nothing as substantial as the eastern frontier semaphore system exists elsewhere in South Africa - and possibly in the former British empire. Probably only in Britain itself was the system as extensive as here. This domestic British development arose out of the circumstances of the Napoleonic Wars, when it was essential to send messages quickly from the Admiralty in London to the great naval arsenal at Portsmouth. To some extent the British borrowed from the French, who used the inventions of Claude Chappé extensively in communicating by semaphore.

In the Cape Monthly Magazine of November 1859 Hall wrote a

description of the system. There were two lines of communication, one from Grahamstown through Governor's Kop tower, Gras Kop, Botha's Post, Dans Hoogte, to Fort Beaufort; the other from Grahamstown (Fort Selwyn) again through Governor's Kop tower to Fraser's Camp, Piet Appel's tower and Fort Peddie. A third line, down to Bathurst from Fraser's Camp was never constructed.

The entire system cost £5 000. The cost of each tower was £500. Each was manned by a sergeant and five men. It proved difficult to keep these detachments supplied with water, and the reading of the semaphore signals was complicated by poor telescopes, heat refraction, and early morning mists.

The masts must have been long, if we are to judge by the surviving illustration of the one at Fort Selwyn by the artist Thomas Baines (in the corridor of the Grahamstown Town Hall). They were crossed by a "regulator" beam, at each end of which were two pointers. These could be cranked round by means of chains, and, together with movement of the "regulator" beam, gave a possible 96 variations.

Most of the towers were burnt during the war of 1846, but this eastern Cape example of a communications' system that could send messages faster than a galloping horse has a unique interest. Indeed it was only in the 1840's that the invention of the electric telegraph began to supersede semaphoring in Europe itself. However, as mentioned, the local system does not appear to have functioned very efficiently. No attempt was made to reconstruct the towers after 1846; so they remain the roofless shells that they became in that war. It is to be hoped that some kind of historical reconstruction will be attempted at one or two towers. Tourists and South Africans could then more easily appreciate the great problems of communication in the pre-electric age.

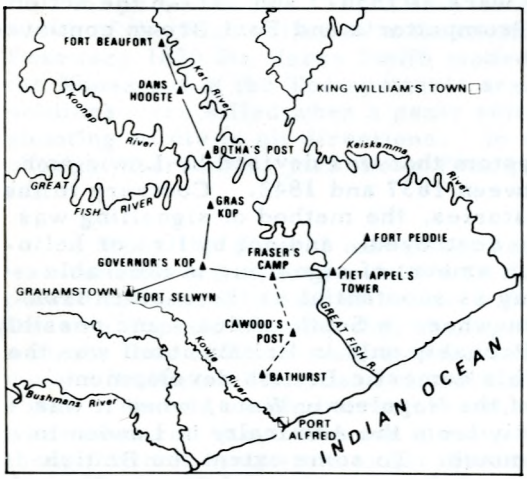


FIGURE 4 Proposed distribution of signal towers

After Kirby, P R.

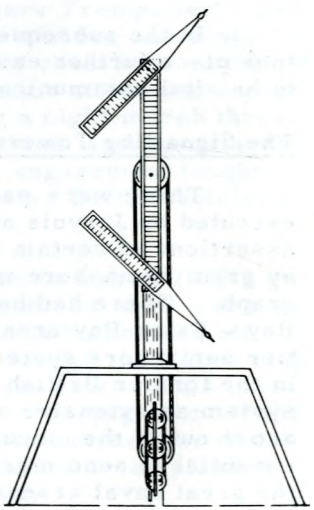


FIGURE 5 Diagram of signalling mechanism

THE GEOLOGY OF THE EASTERN CAPE

B. E. Lock

Although some of the world's oldest rocks are found in southern Africa*, our knowledge of the geological history of the Eastern Cape spans only the last five or six hundred million years. We know that by about that time a long period of erosion had planed down an older mountain range which once ran along the southern and western coasts of the Republic. The rocks of which this range was built are still to be seen in small areas near Uitenhage and west of Port Elizabeth, as well as in more extensive regions in the vicinity of George and of Oudtshoorn, and in the western Cape. These rocks are known as the Pre-Cape strata.

By five hundred million years ago the sea had advanced inland and covered the southern tip of the African continent and deposited a thick sequence of sandstones, now known as the Table Mountain Group after the fine exposures above Cape Town, where this sandstone is the thickest known example of its type in the world. Careful interpretation of the sandstone reveals a complex picture of tidal flats and deltas, seaways and shorelines. At about this time a deterioration of world climates led to glaciation of many parts of the world, including South Africa (the Ordovician Ice Age, about 450 million years ago).

The Table Mountain Group is overlain by the Bokkeveld Group, which consists of alternating sandstones and shales. The shales in the lower part of the group were laid down on the sea floor and contain abundant fossils at some localities (south-west of Alexandria, for example). These fossils indicate an Early Devonian age (375 million years ago), while the upper shales are believed to have been deposited in fresh water. The sandstones represent periodic advances of a complex of deltas which built out from land to the north and which were then submerged by crustal subsidence. The overlying Witteberg Group consists mainly of pure quartz sandstones which form most of the higher land around Grahamstown. These sandstones, mostly deposited by rivers, contain structures which indicate that sediment was being transported into the area both from the continental interior to the north and from a source in the south which until that time had not been evident. This source is believed to have been the earliest and southernmost ranges of a new mountain chain situated south of the present continental edge and now removed with the continent of Antarctica by continental drift.

These three groups - Table Mountain, Bokkeveld and Witteberg - comprise the Cape Supergroup (or Cape System of the older terminology, now abandoned).

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* lavas from the Barberton Mountainland are believed to have been erupted nearly three and a half thousand million years ago.

The oldest strata of the overlying Karoo Supergroup consist largely of glacial deposits and record the events of another ancient ice age which occurred about 300 million years ago. These deposits (the Dwyka Group) have their counterparts in South America, Antarctica, India and Australia, and provide one of the most striking proofs of the theory of continental drift (a theory which in the last few years has achieved almost universal acceptance among geologists).

During this time the mountain ranges in the south continued to rise, and a major body of water covered the interior of southern Africa. The available evidence is not conclusive, but this body of water was probably a lake, not an arm of the sea. This lake was slowly filled with sediments, comprising the Ecca Group. In the eastern Cape the lowest strata were deposited by violent and rapidly-flowing slurries of sediment-laden water (turbidity currents), while fine muds accumulated in the central part of the lake. The final stages of infilling of the basin took place by migration of deltas inwards from the margins. The Dwyka and Ecca sediments are well exposed in cuttings along the road towards Fort Beaufort, north-east of Grahamstown.

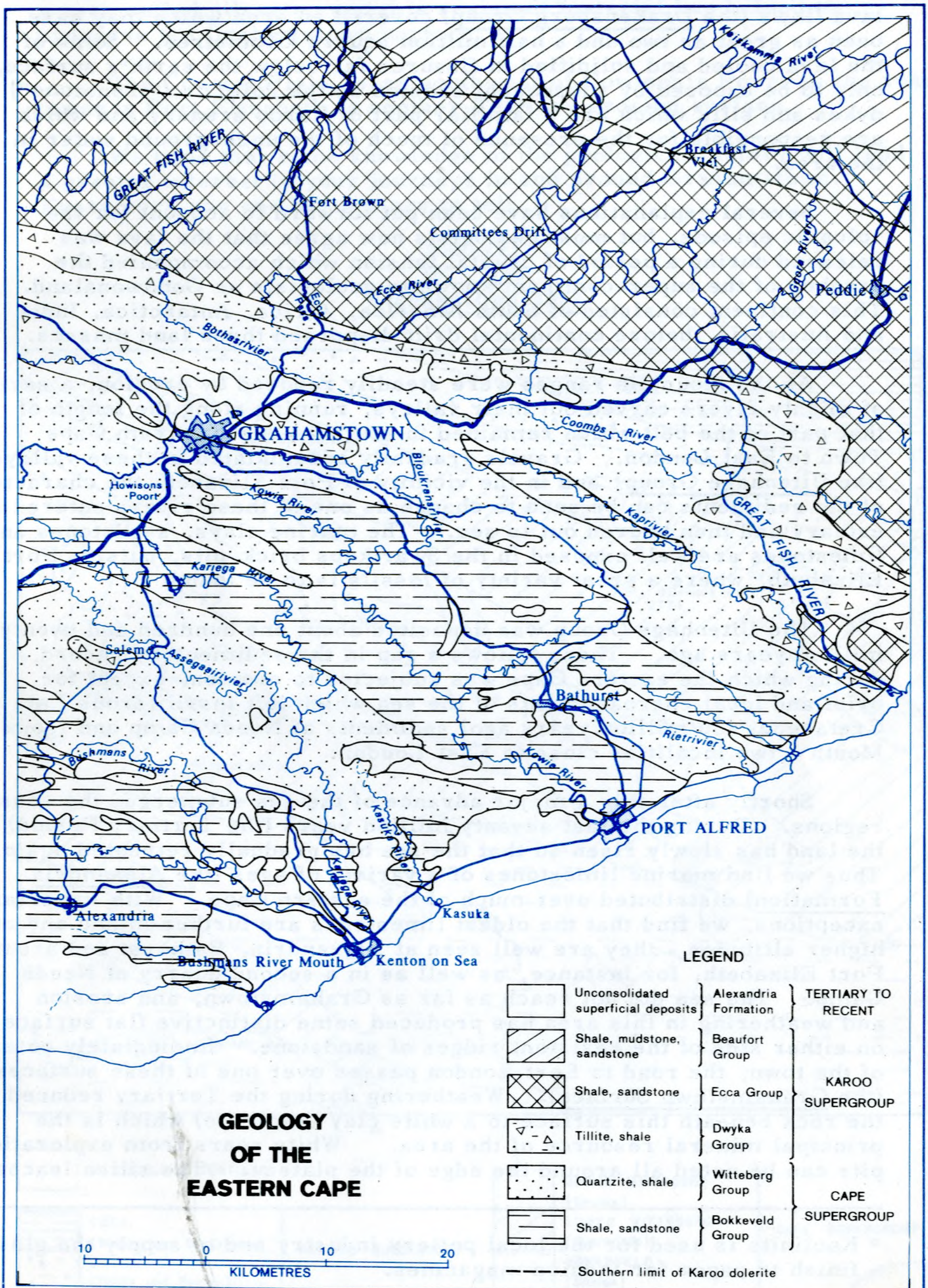
From this time onwards, that is for the last 250 million years, southern Africa has been a land area. The red and green mudstones and sandstones of the Beaufort Group, which overlies the Ecca Group, were deposited by rivers and flood waters over a vast plain on which wandered large numbers of reptiles, including those from which the early mammals descended. These strata are world famous because the fossils found in them reveal many details of the transition from reptile to mammal.

During this time the mountain ranges to the south were growing in height and were becoming more extensive, so that by the time that the last of the sediments of the Beaufort Group were deposited, the mountain-building process had reached a climax, and the Cape Fold Belt, as we know it today, had come into being. Later erosion has partly reduced the scale of these mountains, which must have been far more impressive two hundred million years ago.

The first beds of the Stormberg Group, the Molteno Formation, differ from the underlying Beaufort Group in several superficial respects, notably colour, but were deposited in a similar environment. Most notably, the sandstones frequently are very coarse, reflecting the steep and rugged nature of the terrain in the mountainous southern region from which the sedimentary debris had been derived.

The succeeding strata of the Stormberg Group (the Red Beds and the Cave Sandstone) reveal a change in climate, marked mainly by increasing aridity. The white fine-grained sandstones of the latter unit were partly wind-blown in origin, although fertile and well-watered oases certainly existed - fossil fish and crocodiles are known from the north-eastern Cape Province, for example.

Deposition of the Karoo Supergroup terminated with a most dramatic episode - volcanic activity was widespread over most of southern Africa



GEOLOGY
OF THE
EASTERN CAPE
GREAT FISH RIVER
Keiskamma River
Breakfast Vlei
Fort Brown
Committees Drift
Ecca River
Ecca Pass
Groot River
Peddie
Bothasrivier
GRAHAMSTOWN
Coombs River
Bloukransrivier
Howisons Poort
Kowie River
Kaprivier
Kariega River
Salem
Assegaairivier
Bathurst
Rietrivier
Bushmans River
Kasuka River
Kariega River
PORT ALFRED
Kasuka
Alexandria
Bushmans River Mouth
Kenton on Sea
LEGEND
Unconsolidated superficial deposits
Alexandria Formation
TERTIARY TO RECENT
Shale, mudstone, sandstone
Beaufort Group
Shale, sandstone
Ecca Group
KAROO SUPERGROUP
Tillite, shale
Dwyka Group
Quartzite, shale
Witteberg Group
CAPE SUPERGROUP
Shale, sandstone
Bokkeveld Group
10
0
10
20
KILOMETRES
Southern limit of Karoo dolerite

FIGURE 6

north of the mountain range, and a continuous blanket of hundreds of lava flows (the Drakensberg Group) covered an area which may have been as great as two and a half million square kilometres. Some of the lava cooled and solidified in fissures far below the earth's surface, only to be exposed by subsequent erosion as the dolerite ("ironstone") dykes and sills which are a familiar part of Karoo scenery and which are responsible for the presence of much of the underground water in the area.

Several explanations have been put forward to account for the volcanic episode, but most geologists now agree that the lava was released during a period of crustal tension which accompanied the breakup of the super-continent known to geologists as Gondwanaland. This continent consisted of South America, Africa, Antarctica, India and Australia, before continental drift dispersed these land masses.

As the mountain ranges were steadily reduced by erosion, a series of mighty rivers carved out their valleys, running along the length of that part of the belt which remained in southern Africa, from Cape Town to East London. Gravels gradually accumulated in these valleys (the Uitenhage Group) and in the vicinity of Port Elizabeth the character of the sediments can be seen to change as one of these rivers entered its estuary and then poured out to sea. The marine clays, sandstones and limestones are well exposed in the Swartkops brick-pits, outside Port Elizabeth, where a great variety of fossils is to be found.

The Uitenhage Group was deposited about one hundred and twenty million years ago. There follows a gap in the sedimentary record during which the eastern Cape was subjected to erosion, except for brief and local encroachments of the sea which left fossiliferous Late Cretaceous (80 million years ago) sediments at Needs Camp and Igoda Mouth - two localities close to East London.

Shortly after this a major advance of the sea submerged the coastal regions. During the last seventy million years (the Tertiary Period) the land has slowly risen so that the sea has gradually retreated again. Thus we find marine limestones of a variety of ages (the Alexandria Formation) distributed over much of the eastern Cape. With important exceptions, we find that the oldest limestones are further inland and at higher altitudes - they are well seen at Alexandria, Bathurst and around Port Elizabeth, for instance, as well as in a second quarry at Needs Camp. The sea did not reach as far as Grahamstown, and erosion and weathering in this area has produced some distinctive flat surfaces on either side of the resistant ridges of sandstone. Immediately outside of the town, the road to East London passes over one of these surfaces (the Grahamstown Surface). Weathering during the Tertiary reduced the rock beneath this surface to a white clay (kaolinite) which is the principal mineral resource of the area.* White scars from exploration pits can be noted all around the edge of the plateau. The silica leached

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* Kaolinite is used for the local pottery industry and to supply the glossy finish to paper for fashion magazines.

from the parent rock was re-deposited in the soil above the kaolinite as a rock called silcrete, and this resistant material has helped to preserve the Grahamstown surface.

The Coastal Plain, seen southwest of Howison's Poort on the road towards Port Elizabeth is another Tertiary erosion surface.

We hope that some knowledge of the geological history will lend a greater interest to your journeys in and around Grahamstown. Every rock you see has a story to tell.

GEOLOGY
OF THE
GRAHAMSTOWN AREA

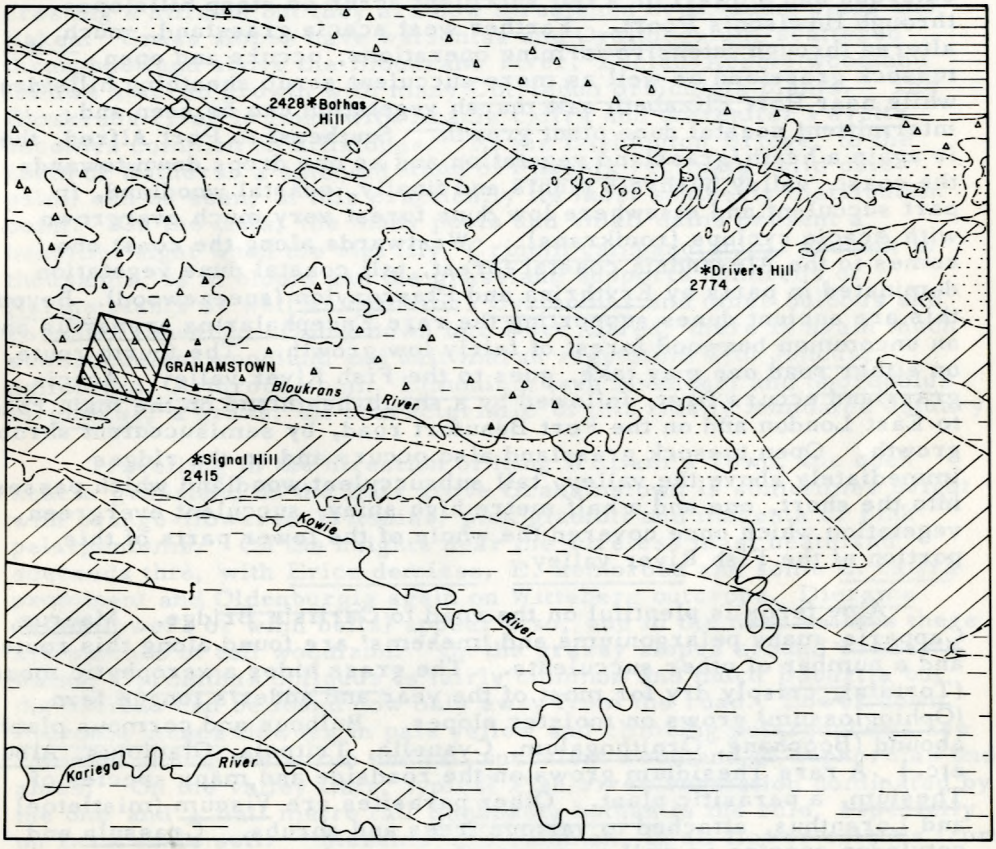


FIGURE 7

VEGETATION OF THE GRAHAMSTOWN AREA

A. Jacot Guillarmod

Going on any of the four main routes from Grahamstown, one encounters different vegetation types. To the north, along the road to Carlisle Bridge and Bedford there is acacia grassland, dwarf shrub steppe and dry temperate savannah followed by tall subsucculent woodland and on open plain with semi-karroid growth. Southwest on the way to Port Elizabeth one passes first heathland and tussock grassland (grossly infested with giant weed species such as pine trees, eucalypts and species of Australian acacias as well as dense thickets of Hakea in some parts) with Oldenburgia on Witteberg rock outcrops and a dwarf or a tall succulent scrub on steep hillslopes through Howison's Poort. Farther west acacia grassland, much altered through intensive farming operations, occurs and open tussock grassland as well as more succulent scrub sheathing hillsides, while near Port Elizabeth salt marsh vegetation can be seen and intermittent coastal dune plant growth. Southeast to Port Alfred, there is again a heath/grassland vegetation and as one drops down towards the coast, valley bushveld plants and finally, coastal woodland, in part succulent and elsewhere low dune forest very much overgrown with Acacia cyclops (rooikrans). Westwards along the coast one comes to the Alexandria coastal forest, tall coastal dune vegetation dominated in parts by Erythrina and Ptaeroxylon (sneezewood). Beyond this are ancient dunes supporting the rare Encephalartos arenarius and an uncommon boxwood forest of fairly low growth. The fourth route, on either road one may take, goes to the Fish River valley. Acacia grassland occurs first, followed by a shrub-heathland on the main road to East London and on the Fort Beaufort road, by semisucculent shrub growth. Open tussock grassland also occurs and on the ridges immediately above the valley, tall subsucculent woodland which passes into the short, one and a half metre high spiny, succulent evergreen vegetation which once covered the whole of the lower parts of this portion of the Fish River valley.

Aloe ferox is plentiful on the road to Carlisle Bridge. Maerua, Capparis, many pelargoniums and 'mesems' are found along this route and a number of other succulents. The grass hides a xerophytic moss (Tortula), crisply dry for most of the year and adder's tongue fern (Ophioglossum) grows on moister slopes. Bulbous and cormous plants abound (Boophane, Ornithogalum, Cyanella, Tritonia, Gladiolus, Albuca, etc.) A rare Thesidium grows on the roadside and many species of Thesium, a parasitic plant. Other parasites are Viscum (mistletoe) and Loranthus, attached to various trees and shrubs. Crassula and cotyledon species as well as many other succulents, are common. Though the rainfall is low, mist encourages many lichens, on the ground, rocks and shrubs.

On the Port Elizabeth road, once through the pine-covered slopes of former heathland, and in the vicinity of the Assegaai river, one encounters valley bushveld and semisucculent woodland with various Euphorbia species, Aloe africana and A. speciosa, some Passerina,

Euclea species and climbing pelargoniums, with a little Portulacaria afra, (elephant's food) some deliberately planted on cuttings. Near Seven Fountains Leucospermum attenuatum and Bobartia indica occur on Witteberg outcrops.

In season, the roadsides are brilliant with Oxalis, Sutera and Cotula species and the weed Cichorium (chicory) has escaped from cultivation to form a clear blue ribbon of colour when it is in flower. On the Howison's Poort hillslopes especially, September gives a magnificant show of the Grahamstown Heath, Erica chamissonis.

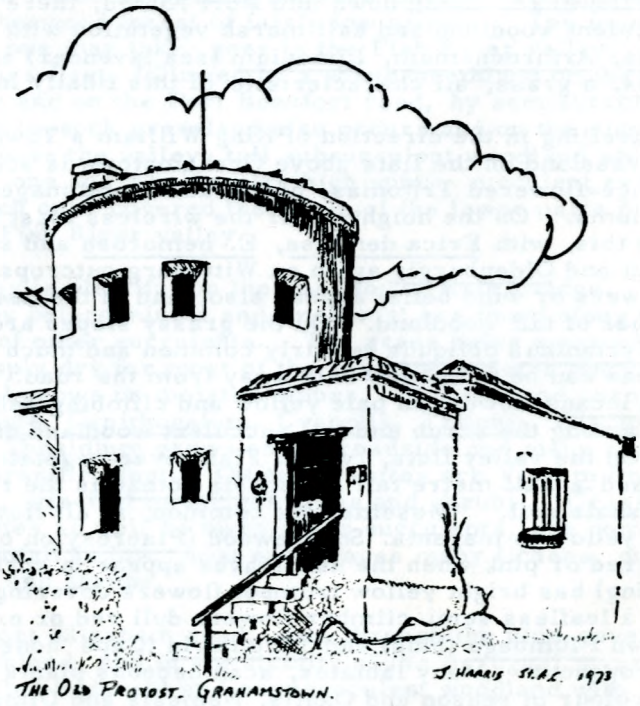
En route to Port Alfred, the Grahamstown Aloe, A. pluridens is common, white and dull purple heaths occur and Disparago ericoides with Rhynchelytrum (a grass) make a red border to the road. A few miles out of Grahamstown, a classic line of Oldenburgia can be seen cresting a hillside but they are now threatened by invading pines and Hakea. Grass slopes have watsonias and Ornithogalum scattered throughout and above the Bloukrans river, Euclea-Acacia woodland follows a scrub growth with many Cotyledon orbiculata plants. The Bloukrans river is lined with Acacia caffra and thereafter Pavetta becomes common on hillslopes. At the Lushington Bridge, to the north of Bathurst a splendid stand of Phoenix reclinata (wild date palm) can be seen, at this practically its most southerly distribution point. On the flats, the many pools and small dams present a beautiful sight when the vlei lily, Crinum campanulatum, present in thousands, is in bloom and the grassland supports hundreds of Nerine plants as well as numerous Cyrtanthus and other bulbous and cormous flowers. Going down into Port Alfred, there is again much semisucculent woodland and salt marsh vegetation with Juncus, Salicornia, Arthrocnemum, Limonium (sea lavender) and Sporobolus virginicus, a grass, all characteristic of this tidally inundated estuary.

Travelling in the direction of King William's Town, the open acacia grassland on the flats above Grahamstown is sometimes bright with orange-flowered Tritonias, pink gladioli and magenta or pink pelargoniums. On the heights near the wireless mast heathland succeeds this, with Erica demissa, E. nemorosa and some E. caffra prominent and Oldenburgia again on Witteberg outcrops. Dierama (wind flowers or wind bells) appear also, and in the deep valleys there are patches of tall woodland. On the grassy slopes around Frazer's Camp, Cyrtanthus obliquus is fairly common and much Bobartia but the proteas can be found now only away from the road. Lower down, Pteronia incana flowers in pale yellow and climbing pelargoniums are common among the scrub and tall succulent woodland of Euphorbias and aloes. On the valley flats, typical Fish river vegetation dominated by the one and a half metre tall Euphorbia bothae is the rule, especially on Ecca shale soil. 'Mesems' are common, in all flower colours from white or yellow to magenta. Sneezewood (Ptaeroxylon obliquum) is brilliant red or pink when the new leaves appear in spring. Rhigozum (driedoring) has bright yellow trumpet flowers covering the low shrubs, Cadaba, a leafless semi-climber flowers dull red or orange, and the well known Plumbago (blue) and Tecomaria (Cape honeysuckle) can be found throughout. Many labiates, acanthaceous plants and daisies provide colour in season and Oxalis, Nemesia and Dimorphotheca (white) cover the roadside together with the rapidly-spreading weed,

Verbesina (small and sunflowerlike). Succulents such as crassulas, cotyledons, Fockea, Ceropegia, Brachystelma, Pachypodium (2 species), and low-growing euphorbias, abound; Jatropha, Phyllanthus and Clutia are common while small trees of Pappea and Boscia (witstam) rise above the general low level of the vegetation which is dense except where it has been overgrazed.

It is easier to find Strelitzia reginae (crane flower) and Encephalartos by going on the Fort Beaufort Road and down Pluto's Vale and here one also sees whole hillsides sheeted with Portulacaria afra, conspicuous for its yellowish-green colour and when in flower, its pink blossom. Crassula lactea, C. portulacea and the brilliant red C. falcata can be seen fairly readily in places and aloes are common.

The vegetation is too rich in species along any of these routes for more than a few examples to be given, but some indication of important constituents has been made. Those interested in further details should consult one of the several local floras. Each route discussed has so characteristic a flora that a collection of some twenty plants, gathered at random is often indicative of the exact area of collection, once one knows the plant communities well.



THE OLD PROVOST. GRAHAMSTOWN.

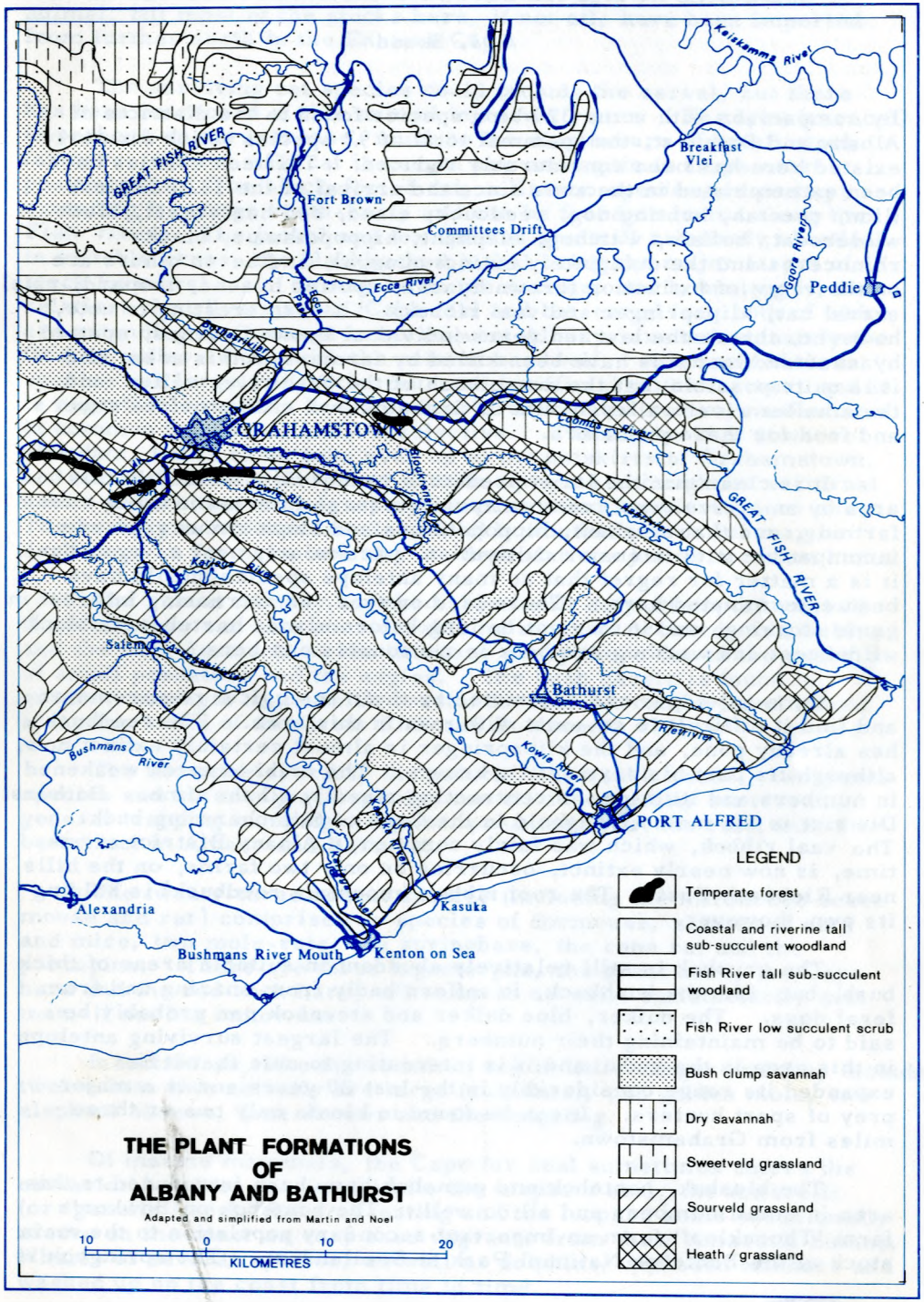

Keiskamma River
Breakfast Vlei
GREAT FISH RIVER
Fort Brown
Committees Drift
Ecca River
Ggora River
Peddie
GRAHAMSTOWN
Blaukrans River
Kowie River
GREAT FISH RIVER
Kaffir Bush
Salem
Bathurst
Bushmans River
Kowie River
PORT ALFRED
Kasuka
Alexandria
Bushmans River Mouth
Kenton on Sea
LEGEND
Temperate forest
Coastal and riverine tall sub-succulent woodland
Fish River tall sub-succulent woodland
Fish River low succulent scrub
Bush clump savannah
Dry savannah
Sweetveld grassland
Sourveld grassland
Heath / grassland
THE PLANT FORMATIONS OF ALBANY AND BATHURST
Adapted and simplified from Martin and Noel
10 0 10 20
KILOMETRES

FIGURE 8

MAMMALS IN THE ALBANY AND BATHURST DISTRICTS

C. J. Skead

By comparison with some 370 bird species found in the districts of Albany and Bathurst, the mammal total of 97 species which formerly existed here has been considerably reduced. Thirteen species have been exterminated in the area since the arrival of the 1820 Settlers (lion, cheetah, hunting dog, reedbuck, eland, red hartebeest, black wildebeest, buffalo, warthog, elephant, hippopotamus, black rhinoceros and the completely extinct quagga), and seven others are on the verge of extinction (brown hyaena, spotted hyaena, leopard, ratel, serval cat, klipspringer and vaal ribbok). It is interesting to note, however, that in the last ten years individual brown hyaenas, spotted hyaenas and leopards have been killed by farmers in this area, and it is quite possible that the dense bush of the Fish river valley and the smaller river valleys south of Grahamstown still provides cover and food for these predators.

It is clear that the large predators cannot be tolerated in this area by an agricultural community with a large interest in stock farming, and that elephant, hippopotamus and black rhinoceros are incompatible with intensive cultivation, particularly near rivers, but it is a matter for regret that so many antelope species should have been exterminated here. There is, however, an increasing interest in game stocking, and it may not be long before eland, hartebeest, black wildebeest and warthog are back in reasonable numbers.

Some antelopes are restricted by their ecological requirements and find it difficult to co-exist with man in this area. The reedbuck has already gone, and the klipspringer is almost certainly extinct now, although its past history is little known. The oribi is much weakened in numbers and its range is contracting steadily all the time. Bathurst District is the main stronghold in the Cape of this charming buck. The vaal ribbok, which was fairly common in Albany District at one time, is now nearly extinct, occurring on only two farms, on the hills near Riebeeck East. The rooi ribbok (mountain reedbuck) is holding its own, however.

The grysbok is still relatively abundant in suitable areas of thick bush, but, like the bushbuck, it suffers badly from snaring and from feral dogs. The duiker, blue duiker and steenbok can probably be said to be maintaining their numbers. The largest surviving antelope in this area is the kudu, and it is interesting to note that it has expanded its range considerably in the last 20 years and is a major prey of sport hunters. It can be found in kloofs only two or three miles from Grahamstown.

The blesbok, bontebok and gemsbok have been introduced to this area in small numbers and all do well. The bontebok on Bowker's farm 'Thornkloof' form an important secondary population to the main stock at the Bontebok National Park at Swellendam. The springbok is

kept for sport and nowadays can almost be regarded as a domestic animal, but most of the stocks here, if not all, have been imported from further north in the Eastern Cape.

The surviving cat species could include the serval, but there has been no record of this animal in recent years. The lynx (caracal) is perhaps on the increase, much to the displeasure of small stock farmers, and the wild cat is caught now and again in traps near poultry runs. The black-footed cat, a Karroo species, is perhaps extending its range south-east, and can be found on farms along the Fish river. The jackal and fox species are still relatively abundant in suitable areas, the blackbacked jackal being the major target of stock farmers' ire. It may be on the decline, and in hunting it, its relatives the silver jackal (Cape fox) and bat-eared fox, both of which are extending their range in north-west Albany, are unfortunately the first to suffer, along with the related aardwolf. All three of these species are largely insectivorous and beneficial to the farmer, and it is regrettable that the "coyotegetter", a predator control method now in common use, is entirely unselective. The aardwolf is nowhere abundant, but is to be seen even up to the outskirts of Grahamstown, and the antbear is widespread in both districts although its nocturnal habits ensure that very few people can say they have ever seen one. The bushpig is widespread along thickly wooded rivers but may be declining, as farmers consider its depredations justify frequent hunts.

The vervet monkey and the baboon still defy attempts to outwit them and they can be a considerable nuisance in orchards and fields, and the rock dassie is on the increase everywhere due to the overkill of small predators and the eagles. The bush dassie is found in greatest strength in the thick coastal forests but can be found inland along the banks of the Great Fish and Bushman's rivers.

The two otter species, the polecat, the snake weasel, two genet species and six mongoose species can all successfully survive the general trapping campaigns against predators, but the ratel may now be extinct in Albany and Bathurst.

The twenty-three rodent species (including the introduced house mouse and rat) comprise two species of dormouse, sixteen of rats and mice, two mole-rats, the springhare, the cane rat and the porcupine. There are three lagomorphs, the great hare, the Cape hare and the red rock hare; all seem to co-exist satisfactorily with man, if not his motor car.

Insectivores, like the rodents, are in little danger and they include twelve bats (two actually are large fruit bats), one golden mole, two elephant shrews, four shrews and the hedgehog.

Of marine mammals, the Cape fur seal sometimes enters the estuaries but does not stay, while the elephant seal, the Antarctic (or 'gazelle') seal, the crab-eating and the leopard seals occasionally arrive on the coast as very rare vagrants from their Antarctic homes. Whales of several species, as well as dolphins, are seen offshore and washed up on the coast from time to time.

To summarize, the Albany and Bathurst districts are well-endowed with mammals and despite the loss of the larger animals, particularly predators, the status of most species is not at all unsatisfactory, and serious attempts to conserve existing species, and to re-introduce the lost ones, should meet with success.

BIRDS IN THE ALBANY AND BATHURST DISTRICTS

C. J. Skead

Because the two districts are clothed with several different veld-types their tally of about 370 bird species, including the coastal sea-birds, is high.

North of Grahamstown, from Carlisle Bridge on the Cradock road to Hunt's Drift on the King William's Town road, the dry Great Fish river valley with its open Karooveld and its Valley Bushveld meets the thornveld and grasslands and sets the southern limit of several inland species such as the Grey-backed Cisticola, the Pied Barbet, the Cape Bunting, the Chanting Goshawk, the White-throated Canary, the Crombec Warbler, and the Karoo Robin. Here can be seen South Africa's largest and smallest birds, the Ostrich and the Penduline Tit or Kapokvoël, the latter hardly larger than the former's eyeball. The Ostrich, once wild, and later of great economic importance, survives now on sufferance. The open flats hold the three bustards, the Kori (uncommon now) the Stanley and Ludwig's as well as the smaller but very common Black Korhaan. Blue Cranes feed there in large flocks on uintjie (Cyperus sp.) bulbs.

The dense valley bush, here as elsewhere, carries the highest aggregate of bird species, most of them inconspicuous, but in aloe flowering-seasons the Malachite, Greater Double-collared and Black Sunbirds are active everywhere. The beautiful Cape Glossy Starling, the Pied Starling and the Fiscal Flycatcher are conspicuous, but most of the robins, warblers and tit-babblers have to be looked for.

The east-west mountain ridge which separates the dry inland areas from the coastal belt of higher rainfall is today so heavily grazed that it holds little interest to the casual observer beyond Richard's and Plain-backed Pipits, Crowned and sometimes Black-winged Plovers, and an occasional Ant-eating Chat. Wherever this grassland is left ungrazed the long grass and heathland macchia bring in the Cape Grassbird, the Cape Bishopbird, an occasional Long-tailed Widowbird, and the Wailing Cisticola. Protea repens near Fraser's Camp towards Hunt's drift in the east, and Protea cynaroides in the Rabbit Bush Forest Reserve approximately 15 km east of Grahamstown (a place crying out for control as a floral reserve) are visited by Cape Sugarbirds, as are the clusters of Leucospermum and Protea repens on the western ridges between Highlands and Alicedale, isolated though these proteas and sugarbirds are from those of their kind west of Port Elizabeth.

The valleys and southern slopes of this mountain divide have relict forests facing the coastal plain from Bathurst in the south-east to Alexandria in the south-west. Here one can find Knysna Loeries, Narina Trogons, Black-headed Orioles, Emerald and Red-chested (Piet-my-vrou) Cuckoos, Forest Weavers and Forest Canaries, African Goshawks and Little Sparrowhawks.

The Suurveld coastal strip with its grassy plains deeply cut by

river valleys covered in dense bushveld provides conditions so varied that most bird species (apart from those mentioned in the drier Fish river valley) thrive here. In fact, most coastal species occur in the karroid areas too, exceptions being the Trumpeter Hornbill, the Black-bellied Starling, the Trogon, the Knysna Loerie, and the Chorister Robin. Conspicuous species are the Secretary-bird, the Crowned Guinea-fowl, the swallows and swifts, the migratory White Storks and Lesser Kestrels, the resident Rock Kestrel and Lanner Falcon, the Crowned Plover and the Hadedah Ibis. Down the years the Hadedah has extended its range far inland while the Cattle Egret from being a rare vagrant has increased greatly since the early 1930's.

In the bush are many small species such as Streaky-headed and Bully Canaries, Sombre and Black-eyed Bulbuls, Cape and White-browed Robins, Boubou and Tchagra Shrikes. Of the migratory cuckoos, the Black, Jacobin, Didric and Klaas' Cuckoos are the commonest.

Species no longer, or very rarely, seen in Albany and Bathurst are the Cape Vulture, the Egyptian Vulture and the Bateleur Eagle, but many other species fluctuate so widely in their vagrant patterns that they are not strictly birds of this region. Otherwise the birds as a whole have not yet suffered any real losses such as those inflicted on the mammals. The Black, Martial and Crowned Eagles still occur, if in diminishing numbers, and inevitably facing extermination in the name of progress with the passage of time. Their territories are too wide for any game reserve to claim them as its own and offer them protection.

Along the coast, the scavenging Black-backed Gull is everywhere, the terns (some as migrants from Europe) and cormorants fish in the gullies and estuaries. In the lagoons Greater and Lesser Flamingoes appear from time to time. Waterfowl are poorly represented, but the two districts have twelve duck and three goose species, as well as Spoonbills, Black and Wood Storks, Stilts, Kingfishers and waders. The Sacred Ibis and the Blacksmith Plover are newcomers but in small numbers.

Two introduced species, now accepted as part of South Africa's avifauna, the European Starling and the House Sparrow, are well-established in towns and villages. They may yet be joined by a third, the Indian Mynah, already as far south as Port St.John's in Pondoland.

FISH RIVER VALLEY EXCURSION: ROUTE GUIDE

The numbers in the text correspond to those along the suggested route in Fig 9 and are intended to focus the reader's attention on selected features.

1. On the outskirts of the built up area of the town one obtains good views of the Fingo Village and Fort England, both of which have been discussed under the Grahamstown excursion.

   The memorial on the northern side of the road records the attack in 1819 on Grahamstown by the Xhosa leader Makana.

   The fold ridges of the Cape System are clearly seen on either side of the Bloukrans valley in which temperature inversions occur during the winter months.

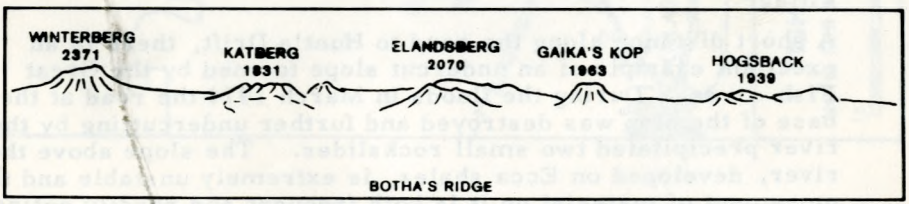
2. Between the outskirts of the town and the road junction to Fort Beaufort the route passes Makana's Kop location and an industrial area laid out by the Municipality. Both are on the northern side of the road.

   Geological and geomorphological interest focuses on the Grahamstown erosion surface with its white clays (seen in cuttings and pits) and silcrete capping.

   Low woody shrubs and bushes occur together with many aloes, and in season there are numerous bulbous flowers such as Moraea, Brunsvigia and Freesia. Patches of indigenous forest can be seen on the south facing slopes below the F.M. mast.

3. From the Fort Beaufort road junction to the Andrew Geddes Bain Monument (at the Committees Drift fork) many interesting species of plants may be seen; these include Bobartia indica, Chrysocoma tenuifolia (bitter Karroo bush, an indicator of overgrazing), Chrysanthemoides monilifera, Ericcephalus africanus (cotton bush), Pelargonium radula, Polygala myrtifolia, and Carpobrotus edulis (Hottentot's fig).

   From the crest of the ridge a good view of the escarpment is obtained. East of the Winterberg (2371m) are the Katberg (1831m), Gaika's Kop (1963m) and the Hogsback (1939m). The old house close to the road was formerly a hotel and the first posting stage out of Grahamstown and is known as Botha's Post.



View of the escarpmemt from Botha's Ridge

Andrew Geddes Bain (1797-1864) was responsible for constructing the Queen's Road from Grahamstown to Fort Beaufort (1837-1845) as well as the road via Pluto's Vale to Committees Drift. Bain was a man of many parts - harness maker, trader, road engineer, geologist and author. He produced the first geological map of South Africa in 1852 and wrote Kaatjie Kekkelbek, in Afrikaans. "The monument on Ecca Heights was erected through the intervention of Professor J. V. L. Rennie who was also responsible for the reinstatement of the names Ecca River, Ecca Heights and Ecca Pass on official maps." (Oberholster, 1972 p. 155).

The Ecca Pass cuttings just past the Monument, show good exposures of Dwyka and Ecca sediments.

4. The route from the Andrew Geddes Bain Monument to Committees Drift passes through the typically semisucculent spiny low forest growth found on the slopes of the Fish river valley. The plant species are discussed in more detail under the section dealing with the Vegetation of the Grahamstown Area.

The church at Committees, built in 1888, has recently been de-consecrated. The farmhouse was originally a hotel when Committees was also a posting stage. The bridge, known as the Clough Bridge, was built in 1877 and is still in use. Floods in March 1974 caused tremendous damage throughout the Fish river valley, the river waters covering the bridge and flooding the police station, but the bridge held. Valuable farmlands were destroyed and the level the water reached is still marked by the line of sand deposits and the uprooting of the vegetation.

The origin of the name Committees is obscure. One suggestion is that it is derived from the corruption of the Afrikaans word 'Kommetjies', or its Dutch equivalent, meaning small basins or hollows.

It is on the Ciskeian side of Committees Drift that the Government intends establishing a prestige town to rehouse the Africans presently living in the Fingo Village in Grahamstown, and to form a possible growth point for industrial development. The original intention to house up to 200 000 people has been revised and a smaller town is now planned. The project will be controlled by the Cape Midlands Bantu Affairs Administration Board but a start is unlikely to be made before 1977. Unless full employment can be assured very serious problems of transport will confront those who continue to be employed in Grahamstown. Moreover the project has resulted in the loss of freehold rights for those persons living in the Fingo Village.

A short distance along the road to Hunt's Drift, there is an excellent example of an undercut slope formed by the Great Fish river. During the floods in March 1974 the road at the base of the slop was destroyed and further undercutting by the river precipitated two small rockslides. The slope above the river, developed on Ecca shales, is extremely unstable and the movement of material on it is both frequent and readily noticeable.

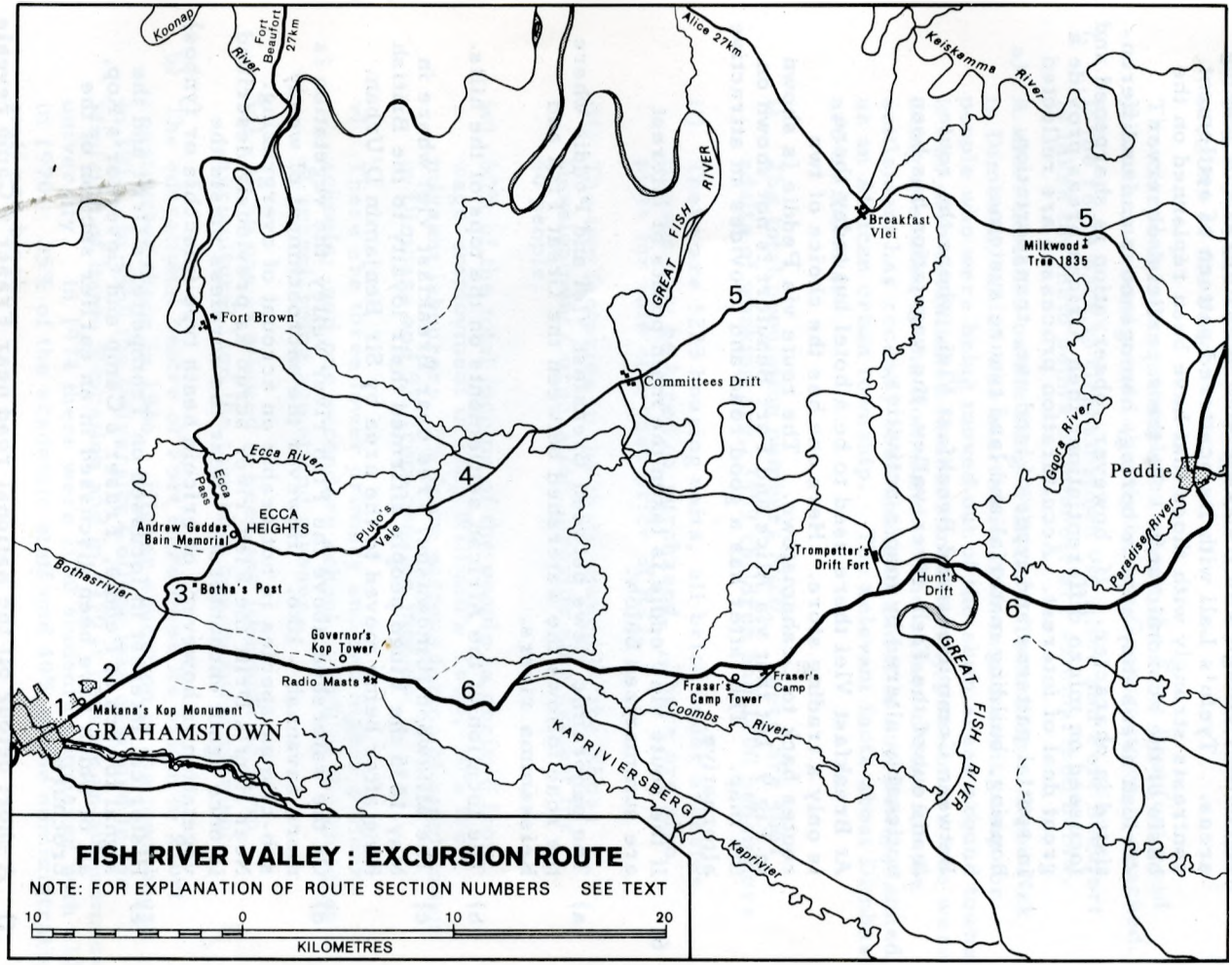

Koonap River
Fort Beaufort 27km
Alice 27km
Keiskamma River
GREAT FISH RIVER
Breakfast Vlei
Milkwood Tree 1835
Fort Brown
Committees Drift
Ecca River
Ecca Pass
ECCA HEIGHTS
Andrew Geddes Bain Memorial
Pluto's Vale
Bothasrivier
Botha's Post
Governor's Kop Tower
Radio Mast
Makana's Kop Monument
GRAHAMSTOWN
KAPRIVIERSBERG
Coombs River
Fraser's Camp Tower
Fraser's Camp
Trompetter's Drift Fort
Hunt's Drift
Gaora River
Peddie
Paradise River
Kaprivier
1
2
3
4
5
6
FISH RIVER VALLEY : EXCURSION ROUTE
NOTE: FOR EXPLANATION OF ROUTE SECTION NUMBERS SEE TEXT
10 0 10 20
KILOMETRES

FIGURE 9

5. Directly after crossing the Great Fish river on the route to Breakfast Vlei, the road forms the northern boundary of Tyefu's 'Lali' which is one of the largest in the Ciskei. Lali is the Xhosa word for an administrative ward consisting of a settlement village with its associated agricultural and grazing areas. Tyefu's Lali with its scattered pattern of settlement contrasts strongly with those that have been replanned on the basis of the economic unit. To the superficial observer African areas may appear boring, homogeneous and undifferentiated in character. If, however, observation is sharpened and focussed on micro differentiations then African areas provide a great deal of interest. Acculturation processes are reflected in spatial patterns and types of land use, transportation, housing, building material and land tenure systems.

Between Committees and Breakfast Vlei, where the route leads out of the Fish river valley, the vegetation has been noticeably altered by man's activities.

At Breakfast Vlei there used to be a hotel but today there is only a trading store. Here one has the choice of two routes back to Grahamstown. The route via Peddie is shown in Fig 9 but that via Alice and Fort Beaufort is not shown on the map. The latter has a good road and provides an attractive alternative.

6. If the route via Peddie is taken the main points of interest are summarized below.

a) The panoramic views between Breakfast Vlei and Peddie where the road follows the watershed between the Great Fish and Keiskamma rivers.

b) The location of the African settlements on the tops of the hills.

c) The Milkwood (Umqwashu) Tree near Breakfast Vlei where in May 1835 the Fingo people affirmed their loyalty to the British King after being moved to the area by Sir Benjamin D'Urban.

d) On the watershed above the Fish river valley the vegetation is more savannah - like. However the encroachment of weedy sub-climax species is noticeable on account of overgrazing. Near Hunt's Drift the Fish river scrub as previously described is once again encountered. Near the wireless masts the vegetation is however, of ericoid heath type (macchia or fynbos).

e) Historical interest in focussed on Trompetter's Drift and the signal towers at Peddie, Fraser's Camp and Governor's Kop, all of which have been discussed in an earlier section of the brochure.

f) A short detour off the national road near Fraser's Camp reveals some attractive views of the Coombs valley.

g) The fold ridge on which the F.M. mast is located is the watershed between the Fish and the Kowie rivers. Along this section of the route good views are obtained of the Fish river valley to the north and the coastal plain and the coastal sand dunes to the south. The Bloukrans railway bridge can also be seen from certain sections of the road.

The circular tour is completed where the Fort Beaufort road joins the national road, shortly before Grahamstown is reached.

7. If the route back to Grahamstown via Alice and Fort Beaufort is taken the main points of interest are summarized below.

a) A short distance on the King William's Town side of Debe Nek is Dimbasa, which was started in 1966 as a transit camp for people who were being moved out of the slum areas around towns. It was also established to accommodate any pensioners who were being resettled in the Homeland. The raison d'être for the settlement has recently been changed and it is now being planned as an African urban township. The relevant facts about Dimbasa are as follows:-

i) The total population numbers 8620. There are 4061 adults of working age, 3459 children and 1100 pensioners.

ii) There are 1223 housing units, all brick under asbestos. Houses may be hired or purchased. There are also plots for sale at a cash price of R21.

iii) The two factories in the town, owned by the Xhosa Development Corporation, provide employment for 40 people.

iv) 60% of the total income of the people is derived from wage-employment in King William's Town, 30% from migrant labourers, 5% from various forms of employment in Dimbasa and 5% from pension monies.

v) There are three lower primary and two higher primary schools; and one secondary school. 93% of the children of school-going age attend classes.

vi) As no one is allowed to keep any livestock or farm agricultural land the township has no rural element.

b) The educational centre of Fort Hare owes its origin to a fort constructed there in 1846. Higher education in the town began in 1916. In 1960 the University College was assigned to the Minister of Bantu Education and in 1970 it became an autonomous university. In 1974 there were 1050 students compared with 613 in 1970. 35% of the academic staff and 40% of the administrative staff are black.

c) Alice was established in 1847 as a centre to supply the garrison

at Fort Hare. It was named after Princess Alice the daughter of Queen Victoria. The Xhosa name 'Idikeni' means the marshes. In 1970 the urban population numbered 783 whites, 616 coloureds and 8 Asians.

d) Fort Beaufort, situated on a meander of the Kat river, was established as a military post in 1822. The Martello Tower formed part of the fortifications constructed after the Sixth Xhosa War of 1834-35. The town is well known for its excellent museum.

The circular tour is completed where the road from Fort Beaufort to Grahamstown reaches the turn-off to Committees Drift at the Andrew Geddes Bain Monument.

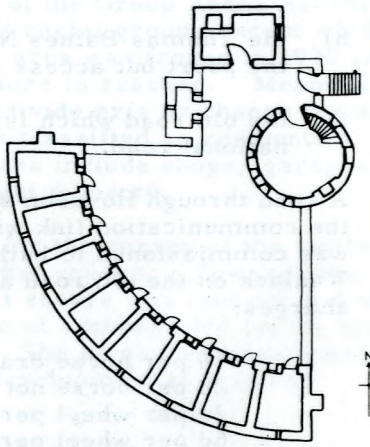
Trompetter's Drift Fort **Illustrated London News**

GRAHAMSTOWN EXCURSION: ROUTE GUIDE

The numbers in the text correspond to those along the suggested route in Fig 11 and are intended to focus the reader's attention on selected features.

1. In 1822 Lord Charles Somerset proclaimed Grahamstown as the seat of the landdrost for the Albany District. A start was made with building the Drostdy but due to numerous delays and difficulties it was not completed until 1830. During this period two contractors who had undertaken the work were declared insolvent. One was Piet Retief who had played a large part in the design of the building. The Drostdy was never occupied by the landdrost. After completion it was used to provide accommodation for Judges on circuit but was soon converted into officers' quarters and served as such until 1873 when it became a public school. Later it became part of Rhodes University. In 1935 the Drostdy was demolished and replaced by the present Main Building of the University.

Between 1835 and 1838 military barracks were built next to the Drostdy. During this time a military provost, or prison, was built as well as a military hospital. The Drostdy gate which formed the entrance to the military site and the parade ground was built in 1842. In 1864 the hospital building was used by the Cape Parliament on the one and only occasion it met outside Cape Town. (The official opening of this event took place in the Shaw Hall in High Street). The old military hospital building now forms part of the Department of Botany at Rhodes University.



Plan of the Old Provost
From Lewcock, R.

The Botanical Gardens were started in the 1850's and are the second oldest in South Africa.

Fort Selwyn on Gunfire Hill was constructed to protect the Drostdy complex. The star-shaped fort is dwarfed by the 1820 Settlers National Monument.

2. On the western outskirts of the town are the new cemetery, the new gaol and the power station.

En route to Howison's Poort one should note the following:

a) the nature reserve which contrasts strongly with the surrounding encroachment of exotic tree species;

b) the Jupiter Research station run by the Physics Department at Rhodes University;

c) the small peri-urban holdings;

d) the evidence of small folds in the rocks exposed in the road cuttings;

e) the contact between the Bokkeveld shales and Witteberg quartzites, a major synclinal structure, and a formation of carbonaceous shales near the Berg and Palmiet rivers;

f) the sharp contrast where the main road crosses the Palmiet river between the narrow valley cut in Witteberg quartzite and the more open form of the valley downstream where the Bokkeveld shales occur;

g) the Howison's Poort Dam from which water is pumped to Grahamstown - Settler's Dam is accessible from the Salem road;

h) the Thomas Baines Nature Reserve is visible from the poort but access is also from the Salem road.

i) the old road which is located below the present national road.

A road through Howison's Poort was constructed in 1837 to improve the communication link with Port Elizabeth. Alexander Howison was commissioned to build the road. Tolls were collected at Waainek on the old road and the following were representative charges:

1d per horse drawing a vehicle;
2d per horse not drawing a vehicle;
2d per wheel per vehicle if fitted with a brake;
6d per wheel per vehicle if not fitted with a brake

3. The route along Mountain Drive follows the crest of a fold ridge and on a clear day the sea and the coastal sand dunes are clearly visible while inland the Winterberg escarpment forms a prominent physical feature. East of the Winterberg (2371m) are the Katberg (1831m), Gaika's Kop (1963m) and the Hogsback (1939m). The Amatolas can be seen in the distance. Good views of the town are also obtained.

As the town is approached the following features are passed:-

a) Grey Reservoir constructed in 1861,

b) a small saw mill,

c) a water mill planned as a tourist attraction, and

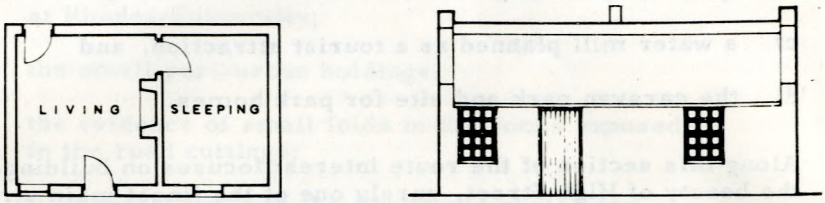
d) the caravan park and site for park homes.

4. Along this section of the route interest focuses on buildings and the beauty of High Street, surely one of the finest main streets in the country. Looking westwards from the Cathedral situated in Church Square the view embraces the central island with its cycads and flowering trees including the kaffirboom, Australian flame and Cape chestnut; the beauty of the many old buildings; the Drostdy Gate and Rhodes University. The southern side of High Street between Hill and Bathurst Streets is the finest example in South Africa of late 19th and early 20th century shopping facades.

5. The area bounded by High, Cobden, Beaufort and Bathurst Streets has many fascinating features - narrow streets, old houses (e.g. Macdonald Street cottages), cobble gutters and wagon stones placed at street corners to protect properties from wagons taking the corners too sharply. In terms of the Group Areas Act this is an undetermined area in which all racial groups except Africans live. In terms of development this area was frozen in 1970 until such time as a decision about its future is reached. Meanwhile special permission is needed to subdivide erfs or change the use of any building. 46% of the area is classified as residential, but other forms of land use in the area include shops, garages, warehouses, market gardens and light industry.

6. The beacon which formed the basis for the survey of the settler farms in the district, is on the market square. Towards the end of the 1820's the present market square was laid out and soon replaced Church Square as the place of exchange for ivory, hides wool and farm produce in general. The large Georgian houses that flank the square testify to the development of a select residential area near the market.

7. To the west of the market square is the old artisan quarter centred on Artificers' Square. The increasing number of settlers moving into Grahamstown during and after 1823 led to the construction of two narrow streets at right angles to each other in order to divide a larger block of the town grid. The lots made available here were very small. "And in order to ensure a separate character in this quarter the corners of the cross streets at the centre were cut back to form a polygonal open square, a fine star focus to the whole." (Lewcock 1963 p. 402) Many of the old buildings in this area have been restored in recent years. Cross and Bartholomew Streets contain a representative cross-section of the 1820 Settler architectural styles. The Cape influence is seen in the flat-roofed double-storeyed buildings, the British influence in the preference for pitched roofs.



A typical Settler cottage

From Lewcock, R

8. a) Fort England became a mental hospital in 1875. Its origin dates back to a decision in 1815 to move the barracks from the centre of town.

   b) To the west of lower York Street there is a municipal housing scheme.

   c) Residential development is planned for the flat ground in the valley - clearly flooding the drainage will be major problems that need solutions.

   d) At the eastern end of Market Street there is a sub-economic housing scheme for whites.

   e) Before crossing the railway line the route passes through the area that has been proposed for Asiatic occupation under the Group Areas Act.

9. The Fingoes who had fled from the impis of Dingiswayo and Shaka settled in the Peddie district after the Sixth Xhosa War (1834-35). Fingo levies were raised to fight the Xhosa in 1846 and 1850-53, and to mark their loyalty Sir George Grey in 1855 granted freehold title to Fingoes in what has become known as the Fingo Village. Plots were sold for £1 sterling and no one was permitted to own more than one erf. Three hundred and twenty titles were granted. Today Africans own the majority of the plots though not all are descended from the original title holders; a few are owned by other non-white racial groups. The Fingo Village has been zoned as a Coloured Group Area and it is the Government's intention to move the Fingoes to a town at Committees on the Fish river some 45km from Grahamstown. In both the Fingo Village and the Tantyi location one should note the condition of the streets, the 'extensions' to the houses, the lack of facilities for the collection of garbage and the distribution of taps and public phone booths.

10. This section of the route, for which a permit is required, goes through the Tantyi and Makana's Kop locations. Outside the Fingo Village Africans can own homes but not land. Unlike conditions in many other locations, in Tantyi, it is possible to

rent either economic houses from the Authorities or just the erf. In the latter case the lessee is entitled to construct buildings which he may sub-let.

11. In the Coloured Area all types of housing are found, including private, economic and sub-economic schemes.

12. From the Currie Park area there are good views of the new Graeme College, the new suburb of Somerset Heights and Oatlands House, built in 1823 by Captain Henry Somerset, son of the Governor, Lord Charles Somerset. The shooting lodge is also still in existence.

13. In the 1820's New Street became the tradesmen's quarter. The street contains some of the earliest settler houses. Like the 'frozen' zone (5) land use and residential patterns are mixed. There are also many houses that have been attractively renovated.

14. Special features of the suburb of Westhill are:

a) St. Andrew's College and the Diocesan School for Girls,

b) a very old post-box on the corner of Worcester Street and Cradock Road dating back to the 1850's and

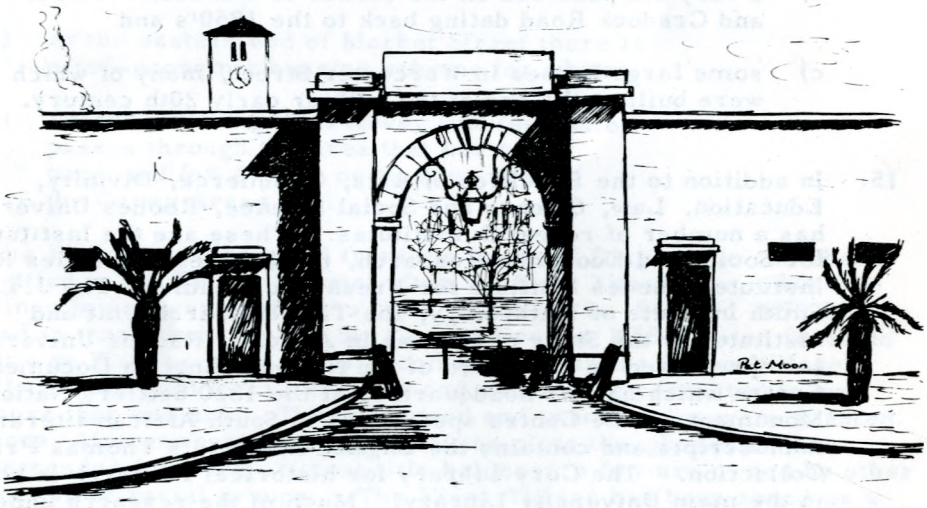
c) some large houses in Worcester Street, many of which were built at the end of the 19th or early 20th century.

15. In addition to the Faculties of Arts, Commerce, Divinity, Education, Law, Science and Social Science, Rhodes University has a number of research institutes. These are the Institutes for Social and Economic Research, the Leather Industries Research Institute, Rhodes Institute for Freshwater Studies, The J. L. B. Smith Institute of Ichthyology, the Tick Research Unit and Institute for the Study of English in Africa. Rhodes University is represented on the Board of the National English Documentation Centre which has its headquarters at the 1820 Settlers National Monument. The Centre specializes in South African literary manuscripts and contains the English Institute's Thomas Pringle Collection. The Cory Library for historical research is housed in the main University Library. Much of the research undertaken at the University receives financial support from bodies such as the Council for Scientific and Industrial Research, the Human Sciences Research Council, the Water Research Commission and the Department of Planning.

Student numbers have shown a steady increase in recent years and in 1973 there were 2203 students registered at the University. 53% of the students came from the Cape Province, 16% from the Transvaal, 7% from Natal, 2% from the Orange Free State, and 2% from South West Africa. 16% of the students came from

Rhodesia and the remainder from other African Territories and from countries overseas. Two-thirds of the students live in the University Residences.

Close to the Drostdy Gate stand the two buildings of the Albany Museum, the Natural History Museum (which also includes archaeological and ethnological exhibits), and the 1820 Settlers' Memorial Museum, with beautifully arranged exhibits of many aspects of British Settler life in South Africa. In addition to the material on display, the Albany Museum houses several valuable study collections. These include, inter alia, an excellent collection of historical material, the National Collection of Freshwater Organisms, freshwater fish and amphibians, as well as extensive collections of land insects and indigenous plants.



The Drosdty Gate

SELECTED READING LIST

Historical and General

Butler, F.G., (ed.) 1969 When Boys were Men. O.U.P. Cape Town

Currey, R.F., 1970 Rhodes University 1904-1970. The Rustica Press, Wynberg.

Hockly, H.E., 1957 The Story of the British Settlers of 1820 in South Africa. Juta, Cape Town & Johannesburg.

Kirby, P.R., 1960 South Africa's first Telegraph, Africana Notes and News 14

Lewcock, R., 1963 Early Nineteenth Century Architecture in South Africa: a study of the interaction of two cultures, 1795-1837. Balkema, Cape Town.

Macmillan, A., 1902 The City of Grahamstown: an historical, commercial and general review. Slater, Grahamstown.

Oberholster, J.J., 1972 The Historical Monuments of South Africa. The Rembrandt van Rijn Foundation for Culture, Cape Town.

Rennie, J.V.L., 1945 The Eastern Province as a Geographical Region. S.Afr. Geogr. Journ., 27

Thomson, D.H., 1952 A Short History of Grahamstown. Grocott and Sherry, Grahamstown.

Watts, H.L., 1957 Grahamstown: a socio-ecological study of a small South African town. Unpublished Ph.D. Thesis, Rhodes University, Grahamstown.

Geology

Engelbrecht, L.N.J., Coertze, F.J. en Snyman, A.A., 1962 Die Geologie van die Gebied tussen Port Elizabeth en Alexandria, Kaap-Provinsie: toeligting van blaaie 3325 D (Port Elizabeth), 3326 C (Alexandria)en 3425 B. Geologiese Opname van Suid-Afrika. Government Printer, Pretoria.

Haughton, S.H., 1928 The Geology of the Country between Grahamstown and Port Elizabeth: an explanation of Cape Sheet 9 (Port Elizabeth). Geological Survey of South Africa. Government Printer, Pretoria.

Haughton, S.H., 1969 Geological History of Southern Africa. Geological Society of South Africa, Marshalltown.

Lock, B.E., 1974 The Growth of Western Gondwanaland. Geological Society of America Bulletin. (in press)

Mountain, E.D., 1946 The Geology of an Area East of Grahamstown: an explanation of Sheet No. 136 (Grahamstown) Geological Survey of South Africa. Government Printer, Pretoria.

Mountain, E.D., 1962 The Geology of the Country around Port Alfred, Cape Province: an explanation of Sheets 3326 D (Port Alfred) and 3327 C. Geological Survey of South Africa. Government Printer, Pretoria.

Truswell, J.F., 1970 An Introduction to the Historical Geology of South Africa. Purnell, Cape Town.

Van Eeden, O.R., 1972 Die Geologie van die Republiek van Suid-Afrika, 'n Toeligting van die 1:1 000 000 kaart van 1970/ The Geology of the Republic of South Africa, an Explanation of the 1:1 000 000 map, 1970 edition. Geological Survey of South Africa, Special Publication 18, Government Printer, Pretoria.

Vegetation

Martin, A.R.H. and Noel, A.R.A., 1960 The Flora of Albany and Bathurst. Rhodes University, Grahamstown.

Gledhill, E., 1969 Eastern Cape Veld Flowers. Department of Nature Conservation, C.P.A., Cape Town.

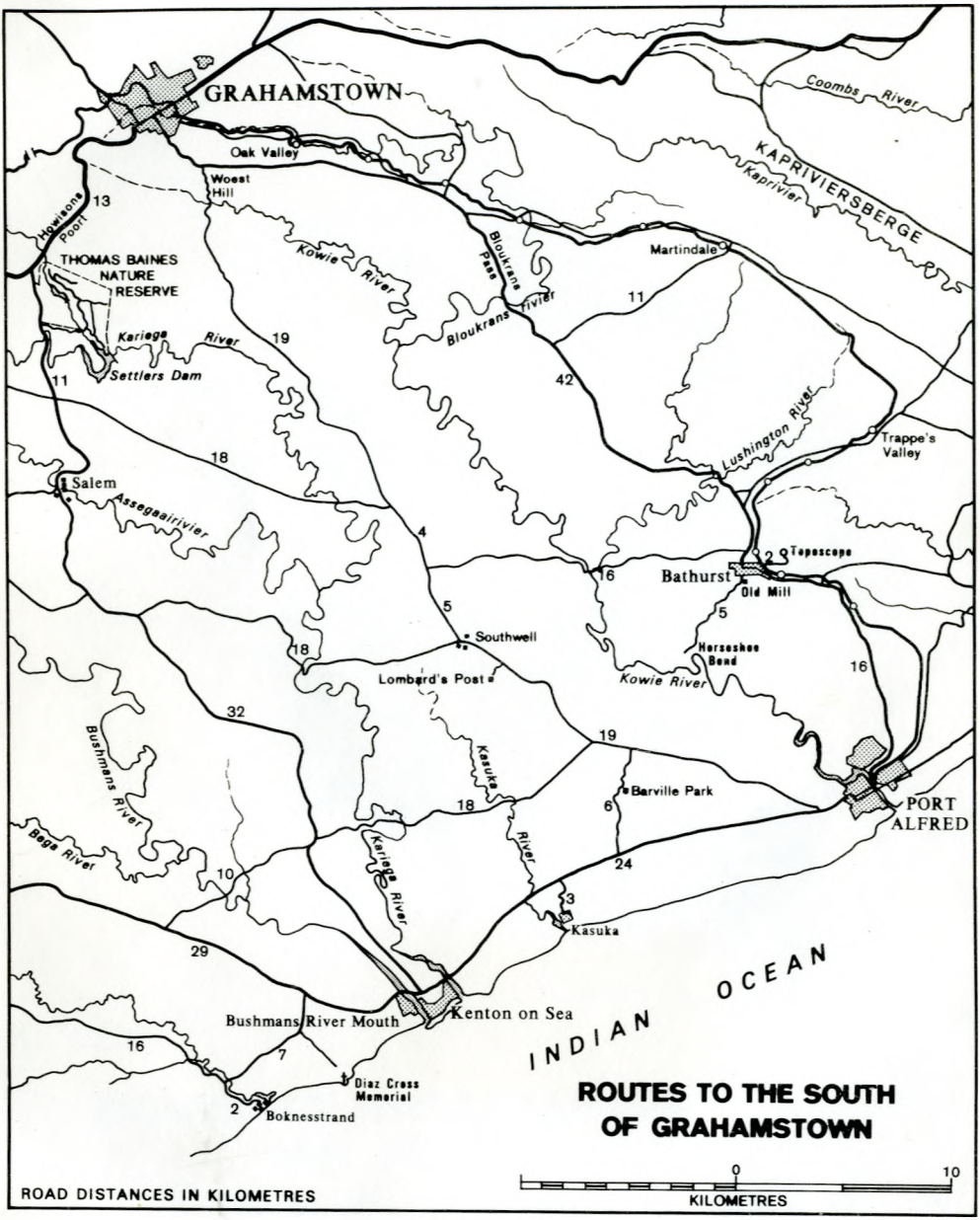
Birds and Mammals

Hewitt, J., 1931 A Guide to the Vertebrate Fauna of the Eastern Cape Province. Part 1. Mammals and Birds. Albany Museum, Grahamstown.

Mc Lachlan, G.R. and Liversidge, R., 1970 Roberts Birds of South Africa. The Trustees of the John Voelcker bird book fund, Johannesburg.

Roberts, A., 1951 The Mammals of South Africa. The Trustees of the mammals of South Africa book fund, Johannesburg.

NOTES


GRAHAMSTOWN
Oak Valley
Woest Hill
Howisons Poort
THOMAS BAINES NATURE RESERVE
Kowie River
Bloukrans Pass
Bloukrans River
Martindale
KAPRIVIERSBERGE
Kaprivier
Coombs River
Kariega River
Settlers Dam
Lushington River
Trappe's Valley
Salem
Assegaairivier
Bathurst
Old Mill
Tapescope
Southwell
Lombard's Post
Horseshoe Bend
Kowie River
Bushmans River
Kasuka
Barville Park
PORT ALFRED
Bira River
Kariega River
Kasuka
Bushmans River Mouth
Kenton on Sea
INDIAN OCEAN
Diaz Cross Memorial
Boknesstrand
ROUTES TO THE SOUTH OF GRAHAMSTOWN
ROAD DISTANCES IN KILOMETRES
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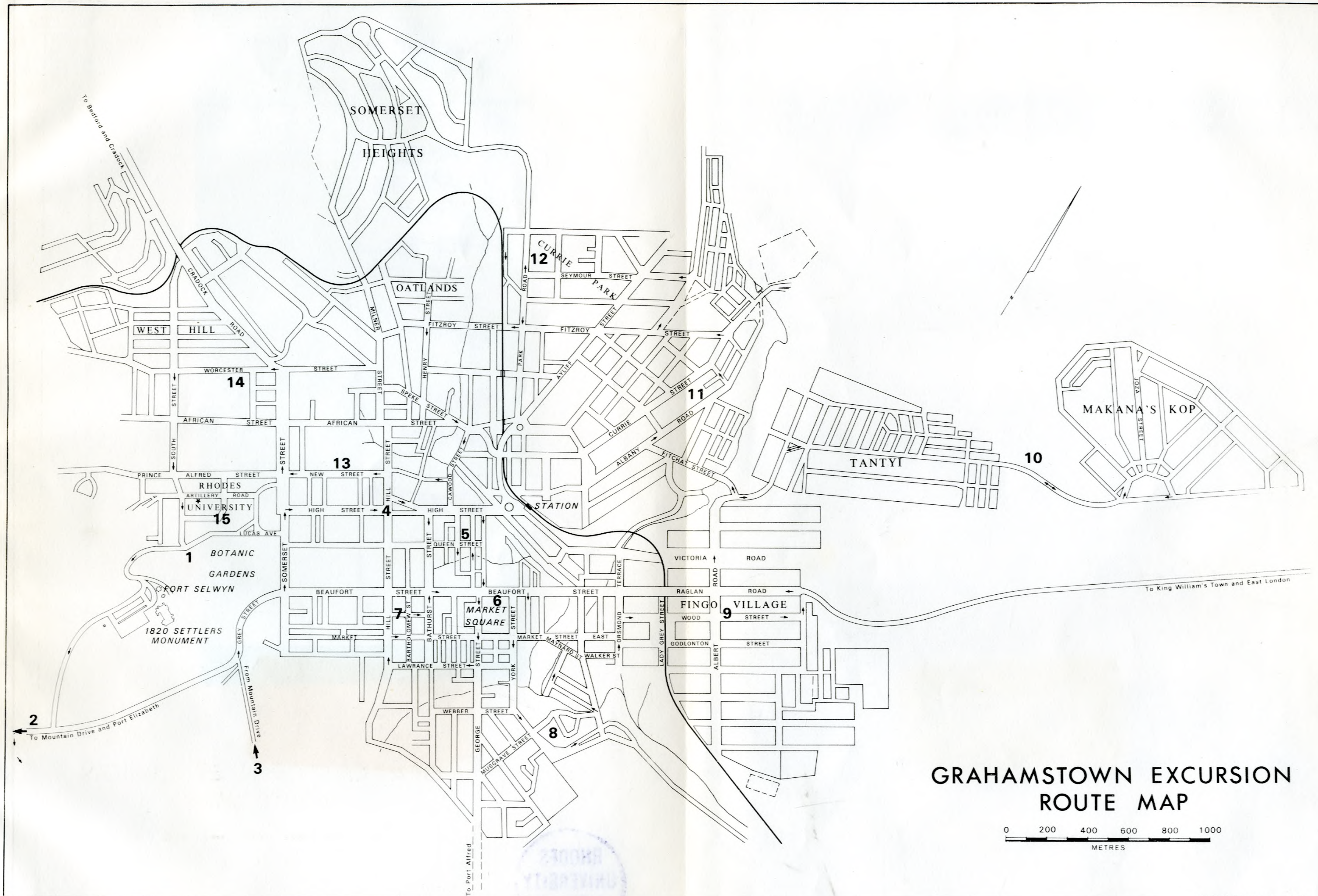
KILOMETRES

FIGURE 10


GRAHAMSTOWN EXCURSION
ROUTE MAP
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METRES
SOMERSET
HEIGHTS
OATLANDS
CURRIE
PARK
WEST HILL
RHODES
UNIVERSITY
BOTANIC
GARDENS
FORT SELWYN
1820 SETTLERS
MONUMENT
MARKET
SQUARE
STATION
FINGO VILLAGE
TANTYI
MAKANA'S KOP
To Bedford and Cradock
To Mountain Drive and Port Elizabeth
From Mountain Drive
To Port Alfred
To King William's Town and East London
CRADOCK ROAD
WORCESTER STREET
AFRICAN STREET
PRINCE ALFRED STREET
NEW STREET
HIGH STREET
ARTILLERY ROAD
LUCAS AVE
SOMERSET STREET
BEAUFORT STREET
MARKET STREET
LAWRANCE STREET
WEBBER STREET
MUSGRAVE STREET
GEORGE
YORK
BATHURST
BARTHOLOMEW ST
HILL STREET
QUEEN STREET
CAWOOD STREET
SPEKE STREET
HENRY STREET
MILNER
FITZROY STREET
PARK ROAD
SEYMOUR STREET
AYLIFF STREET
CURRIE STREET
ALBANY ROAD
FITCHAT STREET
TERRACE
VICTORIA ROAD
RAGLAN ROAD
WOOD STREET
GODLONTON STREET
ALBERT ROAD
LADY GREY STREET
ORSMOND
EAST
MAYNARD ST
WALKER ST
GREY STREET
SOUTH STREET
JOZA STREET
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BASED ON PLAN CE H9

FIGURE 11