

LOOKING AT LANDSCAPES

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by

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LOOKING AT LANDSCAPES

Dim ond lleuad borffor
Ar fin y mynydd llwm
A swn hen Afon Prysor
Yn canu yn y cwm. (HeddWyn)

Hedd Wyn was the pseudonym of the poet who won the Chair at the National Eisteddfod of Wales in 1917. The chairing of the bard is, for many esiteddfodwyr, the culmination of the National Eisteddfod, but in 1917 the Chair remained empty. Hedd Wyn, like many other young men of his generation, lay dead on the battlefields of Europe.

'Nothing but the purple moon
On the edge of the bare mountain
And the sound of the old River Prysor
Singing in the valley

In Hedd Wyn's words, penned in the tongue of my own forebears, the poet described the timeless personality of the landscape in which he had been reared, and which was dear to him.

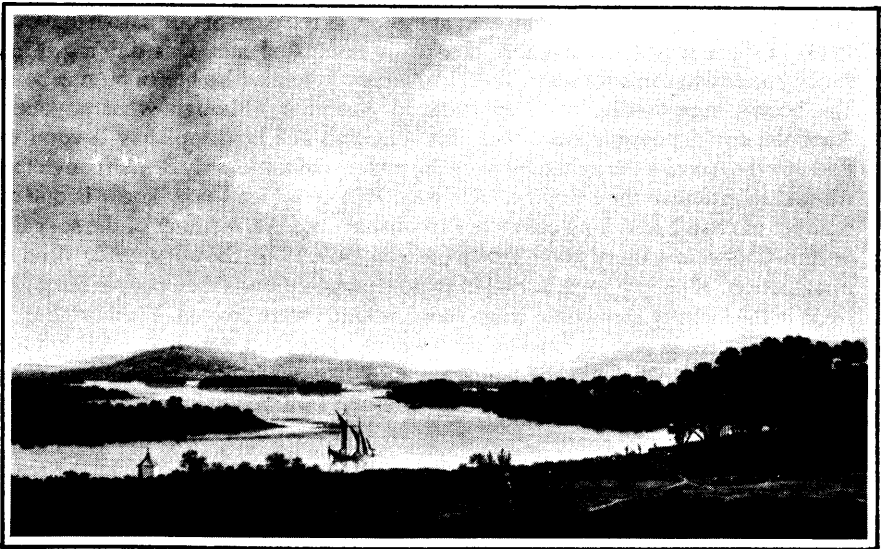


Fig. 1: Upper Lough Erne, Ireland, by Thomas Roberts (1748-1778).

Thomas Roberts (1748 - 78), in spite of his Welsh-sounding name, was apparently an Irishman. We know that he entered one of the most famous schools for artists, the Dublin Society Schools, in 1763 (Crookshank and Glin, 1978). In the 1770s he produced many beautiful landscape paintings, and although some of them reflect the vigour of the restless Irish atmosphere, with its clouds and its rain, many are peaceful and tranquil, echoing in paint the timelessness that Hedd Wyn so simply captured in words. Robert's view of Upper Lough Erne with the Erne wandering between the glacial drumlins of Northern Ireland, is a quiet masterpiece.

Landscape, for me, is Geography, for landscape is the focus of the four great traditions of my subject: spatial; area studies; man-land relationships; earth science (Pattison, 1964,1990). Hedd Wyn and Thomas Roberts, each in his own way, was a Geographer, for each was obviously a student of landscape. My own interest in Geography originated in the view from my bedroom window. I was lucky, Dad was a clergyman, and when he came bade from the army he accepted the parish of St. Peter's Glasbury, in the Wye valley of Wales. From my bedroom window I looked out across The Vicarage lawn, beyond the yew hedge and the orchard, to a series of mounds set in parkland. They were orderly, forming the outline of a rectangle, and when a group of archaeologists excavated the site they discovered that the mounds were the remains of the walls of an Iron Age fort (Savoury, 1955). Although I did not know it at the time, the landscape was already talking to me.

My real interest in landscape was fired when a group of professional archaeologists excavated the Neolithic burial mound at Pipton, at the edge of our parish (Savoury, 1955). I think it was the macabre that really fascinated me. One day a group of grubby scientists came for tea in The Vicarage, complete with a box of human bones. The bones, supposedly, were en route to Australia, although what anyone in Australia could possibly want them for was, and still is, completely beyond me. Perhaps the Aussies thought they were the remains of some early British convict and wanted to establish their origins. Anyway, Pipton, which I now know is one of a number of chambered long cairns in Breconshire and is a member of the so- called Severn-Cotswold gallery grave group (Bowen,1969,1972; Savoury, 1955), fired my imagination. If people were buried in these strange mounds then people must have lived in the vicinity at the time when those mounds were erected. Furthermore, the dwellings of those people must be somewhere. How did they live, what did their houses look like, what did the landscape look like, what was the climate like? A whole series of questions began to puzzle me, and I wanted to know more about the landscape.

A few years later when I was old enough to start exploring the local landscape on horse back, I did so, on Diamond. On her I wandered through a strange series of valleys, especially the dry-valley that led from Havard's Farm to Tiruched through Tregoyd Wood. The valley did not make sense to me: it cut straight through a spur.

On either side of the spur lay other valleys, at right angles to the Tregoyd Wood valley. And the sides of the Tregoyd Wood valley were smoothly curved and sinuous, quite different from the other valleys in the area.

Wherever I looked, puzzles abounded. And wherever we went, as a family, my parents talked about the landscape as if it, and its former inhabitants, were alive. We drove to Clyro, then crossed the Wye valley on a sandy ridge that Mother called 'The Hay Moraine'. She talked of glaciers flowing from the hills of Wales, of rivers of ice debouching on the English plains, leaving tell-tale traces on the landscape. The Hay Moraine, or so she said, formed at the end of a glacier that used to occupy the Wye valley. Just think of it. No trees, no shrubs, no fields, no hedges, no houses, probably no people: just a river of ice in a cold climate curling its way into England. And once Mother had pointed out the end - moraine, and the lateral moraines, I began to see evidence of glaciation all over the place. But when had my parish been glaciated, how long had it taken for climates to change, what were the effects of climatic change on people, and plants, and animals?

Father's interests were different. He read Welsh poetry, Daffydd ap Gwilym (1340-1370), and chuckled gleefully over Daffydd and the ladies of Llanbadarn:

Tlague take the women here -
I'm bent down with desire,
Yet not a single one
I've trysted with, or won,
Little girl, wife or crone,
Not one Sweet
Wench my own!

Mother did not speak Welsh, and lived in blissful ignorance of Daffydd's naughtiness! But Father also read history, and took us to see the houses of heroes of the past, and churches: churches galore! And so I learned of different types of architecture. Of the cruck house and the long house, a building that sheltered a family and their cattle under the one roof (Rees, 1950). We also visited tower houses, such as Sgethrog Tower, built as a defensible house probably in the period between 1250 and 1350 (Jones and Smith, 1965). At that time the Welsh marches were notorious for their 'roving bands of criminals ... who terrorised the ordinary citizen and defied the officers of the law' (McKisack, 1959). A less colonial interpretation of history might argue that the 'roving criminals' were actually good Welsh patriots, but perhaps we should not pursue such political niceties!

We also looked at gentry houses, such as Tretower Court built between the fourteenth and seventeenth centuries (Ralegh Radford, 1960) and I began to learn how difficult it is to distinguish the ancient from the modern in European domestic architecture,

especially when the house has been occupied throughout the centuries. And we visited churches: Saxon masterpieces, like Kilpeck; Norman gems, like portions of St. David's cathedral; churches with Early English lancet windows; Decorated windows; Victorian splendour; in fact, all sorts of churches. Romanesque, Gothic, Baroque, all became part of my vocabulary and we looked at the towns and villages huddled around their central church.

Some villages were different. Eardisley, for instance, consisted of a single lengthy street, with farms and houses on either side. The church lay at the edge of the village. Was the village there before the church, perhaps? If so, were the initial villagers Christians, or had they later been converted to Christianity? And why did the village consist of a single street? I wanted to know, and Geography, I believed, was the subject that would dispel my ignorance. Later, as a student at die University College of Wales, Aberystwyth, I was introduced to the Germanic classification of villages into morphological and genetic types, *strassendorf*, *waldhufendorf*, and so on. I began to realize that so many of the villages of Herefordshire, near my own home, were classic Saxon settlements, whereas the villages of the adjacent Welsh uplands were of different origins and morphology. Dorothy Sylvester *lata*¹ produced a monograph on the villages of the Welsh marches, and showed the relationship between die physical landscape and human response to that landscape (Sylvester, 1969). In 1932, however, Cyril Fox had published *The Personality of Britain*, showing how the physical landscape, with its hills and valleys, its poorer and richer soils, even its vegetation, had influenced human settlement.

But it was E.G. Bowen, Gregynog Professor of Geography and Anthropology at Aberystwyth, who made me realize that I must be a geographer. Bowen was short and slight, but there was nothing slight about him academically, neither was there anything proud or offputting. Bowen rejoiced in the invitations that he received to lecture in schools and village halls throughout the length and breadth of Wales, and he enthralled his audiences. He was outrageous! He painted his story on a broad canvas, without worrying too much about the minor details. I shall always remember him, many years later, addressing a meeting of the British Association for the Advancement of Science. His theme was the distribution of population groups in Britain during the Iron Age, and his thesis hinged on the argument that the distribution of a particular group of people was evidenced by the distribution of a type of bit that those people used for their horses. It was all very neat.

A 'great passage way'⁷ led from north Wales to north-east Scotland, and the peoples at either end of the corridor 'are culturally closely associated with one another'. But a few bits had been discovered beyond the 'passage way'. There you are, you see, they all lived here! But they had problems with their horses, and one ran away⁷ (Bowen, 1965). No, it might not have been terribly scientific, but it was stimulating, and in the local village hall I fell under Bowen's spell.

The Department of Geography and Anthropology at Aberystwyth was staffed by a variety of talented young men. Gareth Thomas, who later became Registrar of the University of Wales and who was the finest tutor whom I have met; Harold Carter, who is now acknowledged as the leading urban geographer of his time; James A. Taylor, the biogeographer; Melvyn Howe, the medical geographer; Edward Watson, of whom I shall say more later; and the elderly Walter Fogg. Wally delivered a First Year Anthropology dawnny on Monday mornings, and The Barn was always full. It did not matter what subject one was reading at Aber, one had to hear Wally. Precisely, on the hour, Wally's pointer moved towards the screen, and on came the first slide: a nubile young lady in the altogether. For fifty minutes we all got our money's worth! Perhaps it will please our professor of Anthropology to know that I appreciate his subject!

At the end of the first term I met Eddie Watson. Watson was a thin, wiry sort of chap from Belfast, totally unassuming, and brilliant in the field. Almost singlehanded he established periglacial studies in Britain, and he also introduced his students to careful and rigorous studies (Kidson, 1983). As Honours students, working everlastingly on one small area, mapping, logging sections, shivering in the Welsh winter wind, many of us wondered whether Watson was quite normal! Anyway, instead of becoming a Human Geographer, a la Bowen, I decided to tiy my hand at geomorphology. From my bedroom window in The Vicarage I had looked at the great dark cirques of the mountains of the Brecon Beacons, and now I decided to plumb their mysteries.

The glacial features of the Brecon Beacons had first attracted significant scientific attention in 1883, when Professor Edgworth David showed that they were a major ice centre. From them, glaciers extended down the valleys of the South Wales coalfield to debouch onto the Vale of Glamorgan in the area around Cardiff. In 1894, Mellard Reade wrote about the cirque-moraines in Cwm Llwhch and in 1903-4 F.J. Howard showed that two major ice streams affected Breconshire.

Edgworth David, Mellard Reade, and F.J. Howard all thought in terms of one period of glaciation, but in 1925 Pocock suggested that there had been two major glaciations of the area, as well as 'two limited and recent glaciations'. Pocock equated all these glaciations with the classic glacial stages described from the Alps in 1909 by Penck and Bruckner. The fact that an extensive area of apparently unglaciated terrain, as well as the waters of the English Channel, divided Breconshire from the Alps, did nothing to deter Pocock's correlations!

For my Honours dissertation, I examined what I believed to be periglacial deposits in the Brecon Beacons that lay down-valley of a series of cirque moraines (Lewis, 1962. Periglacial features develop under climatic conditions in which frost action is particularly important). Then, in 1962, I began to examine both glacial and periglacial

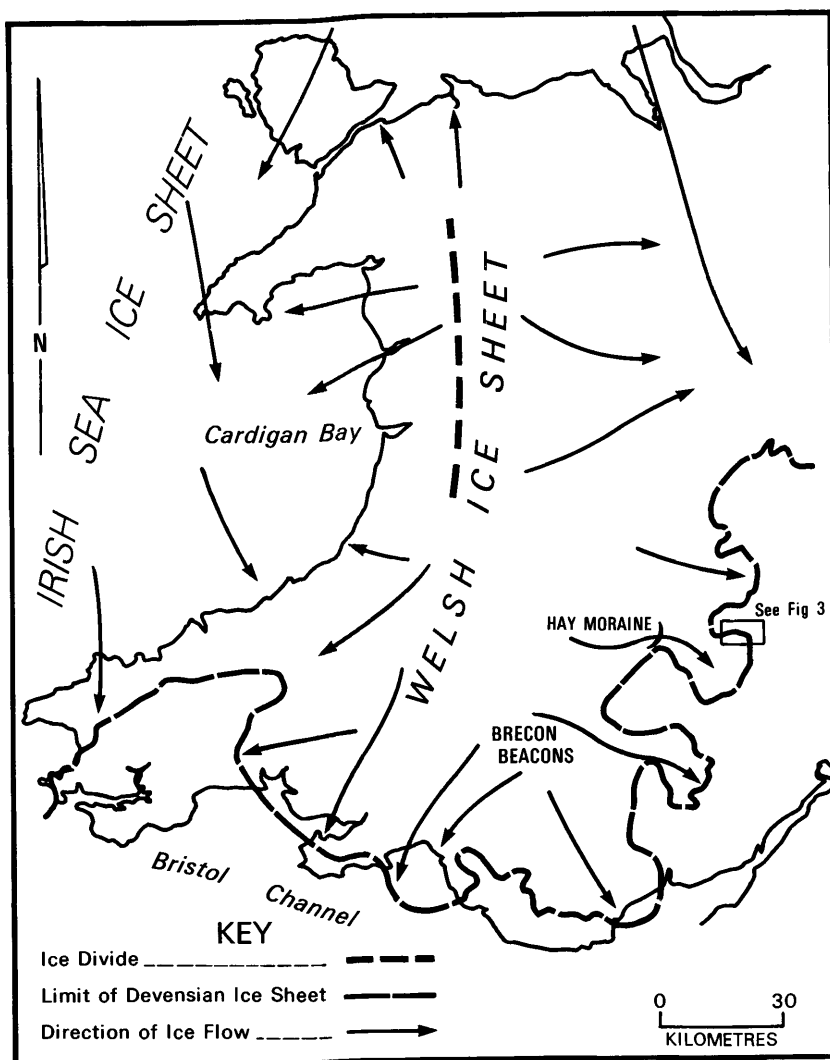


Fig. 2: Directions of Devensian (i.e. last glaciation) ice movement in Wales and the marches.

deposits, and I paid particular attention to the cirque moraines. I found that the most recent phase of cirque glaciation and snow bed formation had occurred in the Younger Dryas (Lewis, 1966, 1970a, 1970b; Campbell and Bowen, 1989). We now believe that the Younger Dryas, or Pollen Zone III, lasted from about 10 600 BP until

about 9 970 BP in the Brecon Beacons region (Lewis, 1970a, b; Moore, 1970; Walker, 1982). I also discovered that, during the Younger Dryas, and possibly before, there was extensive periglacial reworking of the older sediments giving, in many cases, a landscape of solifluction terraces. Experience gained on visits to Iceland and the Faeroes in 1962 and 1963, under the aegis of the Royal Geographical Society, helped me to interpret the fossil landscapes of the Brecon Beacons.

In a subsequent study of the upper Wye and Usk regions in The glaciations of Wales I solved, at least to my own satisfaction, the mystery of the Tregoyd Wood channel. It was formed by melt-water from the mid-Wales ice sheet, flowing under considerable hydrostatic pressure under, and at right angles to the main direction of flow of the ice. The channel is therefore a glacial melt-water channel and conforms to the laws that govern channel formation rather than to those that are applicable to valley formation. The Tregoyd Wood and other similar channels in the area are thus much younger elements in the drainage pattern than the valleys of the major rivers and brooks. In some cases, as between Kingston and Orleton the great glaciers that debouched on the English lowlands from the Welsh uplands caused massive disruptions of drainage, that still affect the area today (Luckman, 1970). The Tregoyd Wood channel was not on that scale, but it remains impressive.

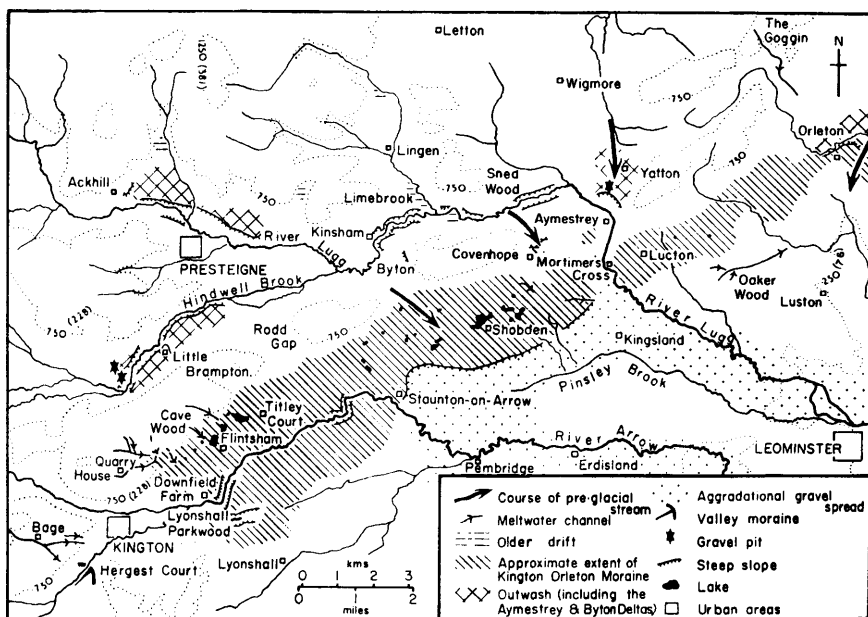


Fig. 3: Diversion of drainage caused by the Wye valley glacier in the Kingston-Orleton area. (After Luckman, 1970).

In 1964 I began to lecture at University College Dublin. Ireland was a new experience. My colleagues in the Geography Department were all expatriates. The Professor, and founder of the Department, was from north Wales and a product of Aberystwyth: Tom Jones Hughes. Jones Hughes contributed much to the study of historical geography and established an excellent Department. He was particularly interested in the nineteenth century landscape, in the size of agricultural holdings, in the use of land, and in the role of landlords: many of whom were absentees. He argued that 'The analysis and interpretation of conditions of landownership and landholding are of great significance in any attempt at understanding human territorial behaviour patterns'. He also asserted that 'The study of the estate system of landownership in Ireland is of particular significance because... the overwhelming majority of the owners of property were aliens ... part of an intrusive culture emanating mainly from England' (Jones Hughes, 1986). The analogy with southern Africa is too obvious to be emphasised.

Jones Hughes was, and still is, fascinated by landscapes. He showed how landlordism was responsible for the creation of estates and 'their associated villages and towns', yet only 6% of the 4 000 or so estates valued at £500 or over in 1876 had core villages and towns which were recognised as such by the... valuers'. Conversely, many Irish towns and villages had pre-landlord origins, and some were pre-Reformation diocesan and parish centres. This theme of settlement origins was developed by one of his students, P.J. O'Connor (1987), who produced a series of maps to show early settlement nodes in County Limerick. O'Connor also looked at the zonation of mid-nineteenth century landlord towns in Limerick, and introduced the frightening concept of the zone of superfluity, the big house and its environs: 'grandeur... sealed in a hygienic micro-world'; the zone of substance, in which the professional and major business people lived; the zone of need, in which 'the makers and menders of a ... largely pre-industrial' age lived; and finally the zone of death, a 'world of little hope that gathered in the poor at a time when explosive demographic conditions went hand in hand with naked deprivation'. The analogy with South Africa today is painfully apparent.

My first colleagues at Dublin, apart from the Professor, were Tony Orme and Robin Butlin. In 1970 Orme published a book on Ireland in *The World's Landscapes* series. In masterly fashion he synthesised Human and Physical Geography, depicted former settlements and showed, in a remarkable series of photographs, how relict settlements still exist, embedded in the Irish countryside. He also showed how the Irish Land Commission reorganised land- holdings in the twentieth century. Eighteen years later William Nolan showed how landlord estates in eastern Ireland, particularly in the fertile lands of County Meath, were expropriated by the Commission after the 1923 Land Act and subdivided into twenty acre holdings: holdings which are now far too small to be economically viable. I hope that the Irish mistake will not be duplicated in the Southern Hemisphere although it has already been partially

repeated in southern Africa in the response of the government to the Tomlinson Commissions' Report (U.G. 61,1955). Present concerns with 'restructuring the rural economy'⁷ in South Africa (Vink, 1990) may well benefit from analyses of the Irish experience. From Tony Orme I learned much about reading landscapes, physical and cultural, and I owe much to the few years that we were colleagues.

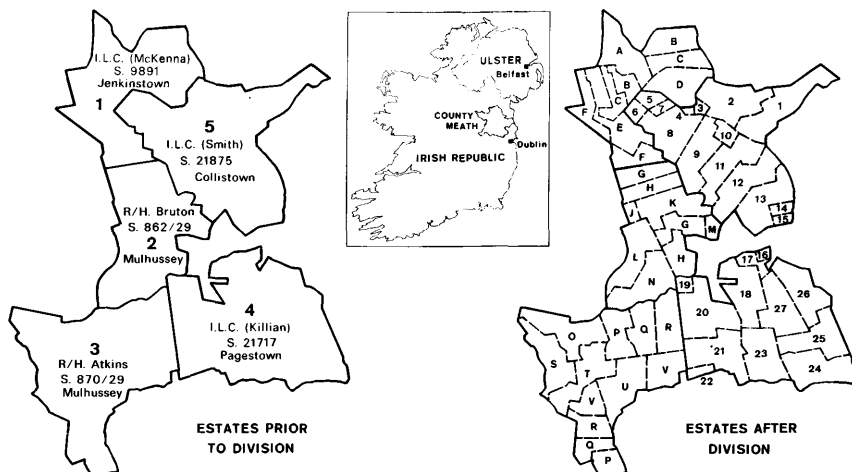


Fig. 4: Estate division by the Irish Land Commission, County Meath, 1953-1962. (After Nolan, 1988).

The main people who influenced me in Ireland, however, were a tall, gaunt man: Frank Mitchell, and a quiet spoken and shy gentleman: Francis Synge. They, with Anthony Farrington, had brought Ireland to the forefront of Quaternary Studies (Lewis, 1984; Stephens, 1974). Perhaps more important, they were interested in everything to do with landscape.

Both Mitchell and Synge were graduates of Trinity College Dublin, trained in the Natural Sciences. They were outstanding field workers, brilliant, yet never domineering. Frank thrived on controversy and occasionally said and wrote things that were so infuriating that other scientists just had to pay attention and prove him wrong. His 1960 paper on 'The Pleistocene history of the Irish Sea' raised the wrath of many of his more cautious colleagues. Almost three decades of stimulating research followed until, in 1989, Nicholas Eyles and Marshall McCabe published their brilliant and revolutionary paper on the glacial deposits of the Irish Sea basin, showing that they record the collapse of an ice sheet margin. The significance of this paper is far reaching, and of major importance to our understanding of global **palaeoclimatic conditions and of landscapes of the past**

As a member of Frank Mitchell's Quaternary stratigraphy committee for Ireland (Mitchell et al., 1973) I learned a great deal about Quaternary stratigraphic correlation and realised the necessity for interdisciplinary studies. Botany, zoology, geology, geomorphology, archaeology, climatology and many other subjects have to be synthesised if the landscapes of the Quaternary, the last few million years of earth's history, and the time-period in which we still live, are to be understood. Synthesis of this nature is, in many ways, what Geography was established to do.

Francis Synge was a different character, quiet, reserved, but with an impish sense of humour, the perfect foil for Mitchell. Francis was the nephew of J.M. Synge, the author and playwright, and shared the family genius. Although Francis will be remembered for his publications (Stephens, 1983), perhaps his greatest contribution to science was in the encouragement of young research workers: Francis certainly encouraged me.

While I was in Ireland I read the work of W.G. Hoskins, an Englishman whom I have never met. This made me realize the immense scope for research that lies in the study of the cultural landscape. His seminal book, *The making of the English landscape*, first appeared in 1955, when it attracted little attention. When reprinted in 1970 the book was an immediate success. In it Hoskins described the landscape before the English settlement, gradually being transformed by man from the 'natural world' into a cultural landscape of villages and gardens and fields with their banks and hedges. Chapter by chapter Hoskins showed how the landscape changed: the colonization of medieval England; the Black Death; Tudor to Georgian England; Parliamentary enclosure, the Industrial Revolution; roads, canals and railways; the landscape of towns; and, finally, synthesis: 'The landscape today'. In a later book (*English landscapes*, 1973) Hoskins wrote that even as a child, 'I felt that everything I was looking at was saying something to me if only I could recognize the language. The landscapes ... were ... more than just scenery. I wanted to know what they were saying'. I, too, wanted to know more about landscapes, cultural as well as physical, and began studies that led to the publication of two books, the titles of which fail to reflect their cultural landscape input (Lewis, 1975, 1980).

There is, as far as I know, no southern African equivalent of Hoskins' work, although Walton's *African Village* (1956), Magg's *Iron Age Communities of the southern highveld* (1976), Hall's *The changing past, farmers, kings and traders in southern Africa, 200-1860*, (1987), and, especially, Professor A.J. Christopher's text in *The World's Landscapes series* (South Africa, 1982) are all important contributions to our understanding of our complex cultural landscapes.

During the 1970s I extended my geomorphic research into Ireland. I had already published a short paper on the glaciation of a remote area in the south west of Ireland in which I showed that ice poured out of the Behy valley, via a series of cols across

In 1971 published on the glaciations of the Dingle Peninsula. Dingle is fascinating, the most northerly of the great peninsulas of south west Ireland that jut-out into the Atlantic Ocean. The central ridge of the peninsula, and the great valleys that cut into Mount Brandon, are surprisingly isolated and lonely, and there I saw amazing landscapes. Around Lough Cruttia, especially in the higher part of the valley cut into Mount Brandon, it was as if the ice had melted yesterday. Virtually nothing had changed in the past 10 000 years, or perhaps longer. At the head of the Owenmore valley a tiny end moraine, still not entirely vegetated, bore witness to the last glacier to occupy the valley head. The landscape, albeit the landscape without man, positively shouted to be interpreted. Much of the west of the Peninsula lay beyond the last glacial limits, and extensive periglacial deposits had accumulated there, on top of raised beach sediments. Dingle thus provided evidence for sea-level change and for climatic change, for the periglacial sediments formed under cold, frost-dominant, conditions. In 1977 I had the pleasure of leading a group of international scientists, under the aegis of the International Quaternary Association, around south and south west Ireland and showing them the evidence of former glacial and periglacial conditions, and of sea-level change (Lewis, 1977).



Fig. 6: The terminal moraine of the most recent glacier in Owenmore, Dingle peninsula, south west Ireland.

In 1989 Carter, Devoy and Shaw examined the evidence for sea-level change in Dingle in great detail, especially at Fahamore and, south of Castlemaine Harbour, at

Cromane. At Cromane they discovered that between 2 330 BP and 450 BP sea-level rose by between 1.2 and 2.2 m, in other words, an annual rise of between 0.6 and 1.1 mm per year. At Fahamore sea-level 4 500 years ago lay below - 2.2 m O.D., indicating the extent of subsequent sea-level rise. Field boundaries, now largely buried by sand, show that man has struggled to till this marginal landscape, but that sea-level rises, and storm-blown sands, have occasionally defeated him. The Greenhouse Effect, of which we hear so much, cannot be held responsible for sea-level changes in Dingle, which pre-date the Industrial Revolution and the widespread use of hydrocarbons.

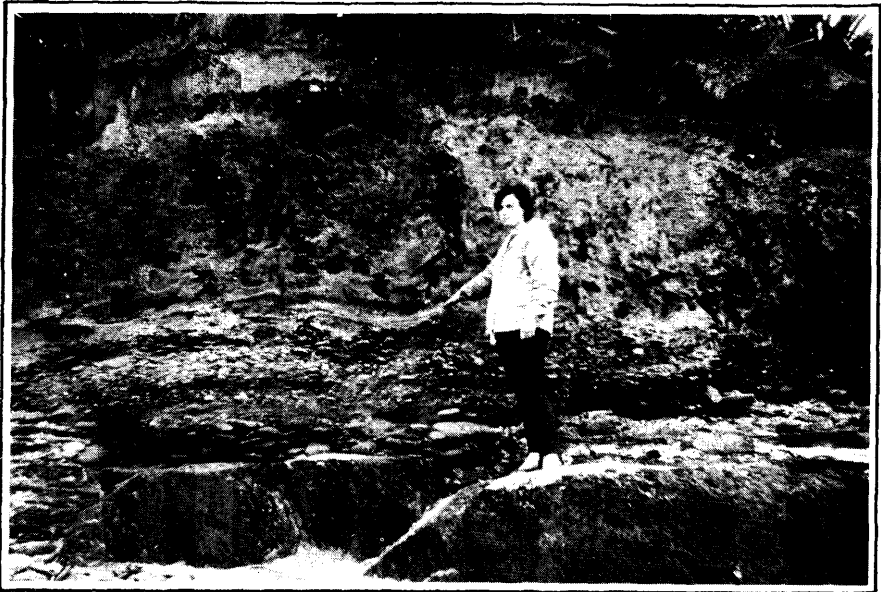


Fig. 7: Sea-level change as evidenced by the raised beach located on top of the rock-cut platform at Smerwick, south west Ireland. The modern beach lies below the level of the rock-cut platform. The raised beach is overlaid by solifluction and other deposits and contains U-shaped structures indicative of former periglacial conditions with severe frost action.

While working in Dingle I discovered lenses of organic sediments in sand deposits. These sediments opened up great possibilities: they could be examined for pollen remains and for coleoptera. John Moore, who later became Professor of Botany at University College Dublin before proceeding to mission work in Africa, identified the remains of a typical interstadial flora in the pollen. Unfortunately we did not find coleoptera although Coope and Sands (1966) had already used coleoptera to reconstruct climatic conditions during the past 70 000 years in the English Midlands. In 1987 Atkinson, Briffa and Coope used radio-carbon dated beetle remains to show the nature of seasonal temperatures in Britain and Ireland over the past 22 000 years.

Their elegant paper proves the nature of recent climatic oscillations. The scaremongers of the present, with their predictions of impending global doom, would do well to consider the facts of the past before writing-off the future. Around 10 000 years ago, for example, the mean annual air temperature in Britain was warming at the rate of 1.7°C per century, while 13 000 years ago it warmed at 2.6 °C per century. Present rates of global warming, estimated variously at 0.4 °C between 1880 and 1980 (Hansen et al, 1981) 0.5 - 0.7°C between 1880 and 1985 (Hansen and

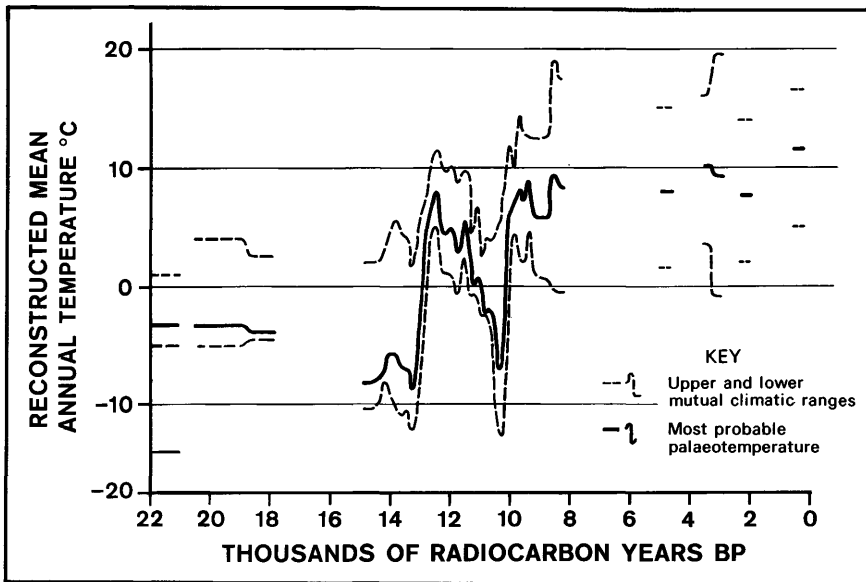


Fig. 8: 22 000 years of temperature changes in Britain, as evidenced by beetle remains. (Atkinson, Briffa and Coope, 1987). Redrawn by permission from Nature. Copyright 1987 Macmillan Magazines Ltd.

Lebedeff, 1987) and 0.75X1 between 1860 and 1990 (Warrick et al, 1990) are considerably less than those our Late Glacial ancestors experienced. A cooling trend has been apparent in northern Scandinavia since about 1940 (Nyberg and Lindh, 1990) and may well also exist in Patagonia (Valle, 1989). Nevertheless it would be foolish not to evaluate man's role in increasing global temperatures, and it is important to ensure that human actions do not change temperatures so as to disasterously affect our environment (Global Change Newsletter 1990). If Warrick et al., (1990) are correct, temperatures will rise by 0.5X1 before 2010, with startling environmental effects. Even in lowland England summer drought will become 'an almost permanent feature of the climate' (Clayton, 1991; Roberts et al, 1990), although that does not necessarily mean that Grahamstown will become a desert.

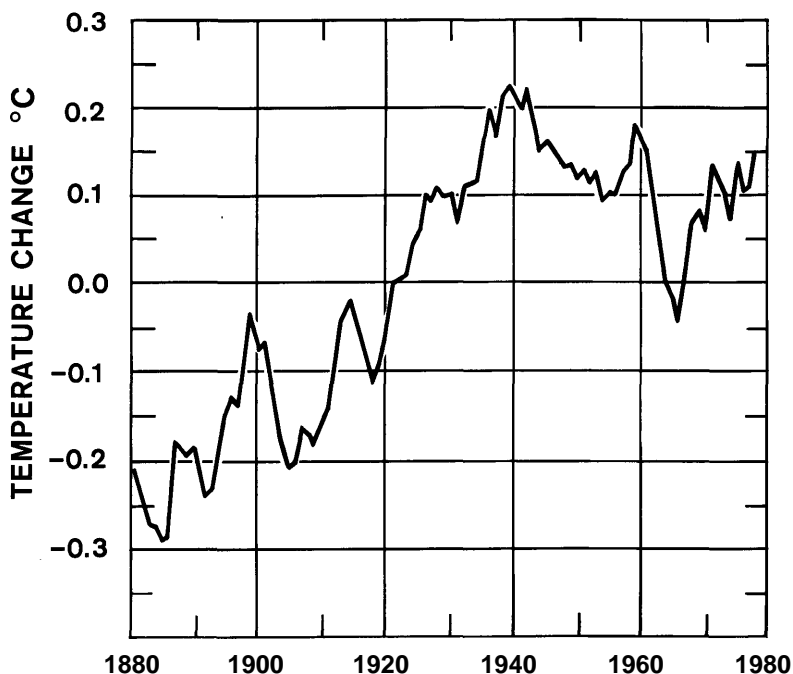


Fig. 9: Global temperature changes between 1880 and 1980 according to Hansen et al (1981). Copyright 1981 by the American Association for the Advancement of Science.

Climatic changes, and the resultant landscapes, fascinate me. In 1983 I was offered the post of Professor of Geography at the University of Transkei. I accepted immediately, for two years, partly because of the opportunity presented to study the landscapes of southern Africa, and particularly those of the Drakensberg, in which I expected to find evidence of climatic change.

At first the immensity of the East Cape Drakensberg was daunting, but within a year I realized that all the signs of Quaternary climatic change exist in those mountains. In 1985 George Dardis and I presented evidence of cold-climatic deposits in the Barkly Pass area, showing that, at some stage in the Quaternary, mean annual air temperatures in the Barkly Pass area had apparently been some 12 °C below those of the present. During 1990 insect remains were discovered under the 'cold' sediments, presenting the possibility of reconstructing earlier climatic conditions in the area in

considerable detail and of dating the 'cold' deposits. Dardis, incidentally, trained in Northern Ireland under Professor Bryan Langlands, who used to hold the Chair at Makerere in Uganda, and whose inaugural lecture at Makerere, delivered in 1969, was entitled *The dilemma of a dilettante* (McMaster, 1989). Langlands would appreciate my own offering!

In 1986, Patricia Hanvey, my wife and myself, were able to present evidence for the former existence of snow beds in the East Cape Drakensberg near the settlement of Rhodes, and for associated mass movement of sediments downslope. Two years later Dr. Hanvey and I (1988) showed that snowbeds of appreciable size formerly existed near Rhodes and were associated with the development of large debris lobes. We postulated, perhaps incorrectly, that two phases of periglacial climate were separated by evidence for an inter-mediate period in which periglacial activity did not exist. The landscapes of the past, at least in the East Cape Drakensberg, were starting to be revealed.

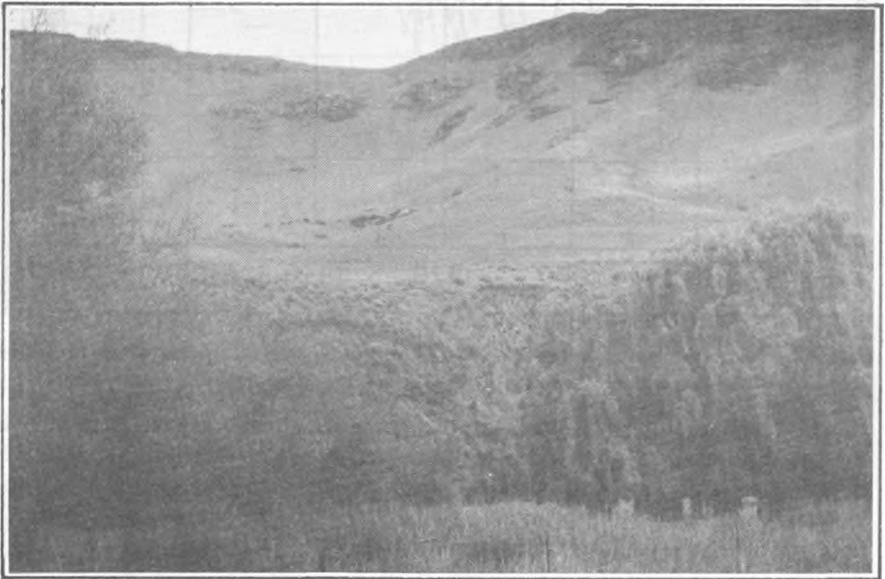


Fig. 10: Debris lobe of Quaternary age with rock glacier-like characteristics, emanating from a hollow near Rhodes, north east Cape Drakensberg.

During 1987 I discovered a section in Bokspruit, near Rhodes, that looked exciting. About 6 m of silts overlies basal gravels. The silts, in turn, are overlain by angular rock fragments, gravels and colluvium. Within the silts are organic layers. Suddenly it seemed possible to date Quaternary deposits in the Drakensberg and, from the nature of the sediments, to reconstruct past landscapes (Hanvey and Lewis, 1990).

The lowest silts were deposited more than 35 000 years ago. The uppermost silts were laid down 27 700 years ago. The silts themselves are lake sediments. In other words, between 35 000 and 27 700 years ago a lake existed in Bokspruit.

In 1989 I took a group of Geographers to Sonskyn, a site that Patricia Hanvey and I were working on in the Barkly Pass area. At Sonskyn a variety of unconsolidated sediments overlies bedrock, and they evidence considerable climatic change. Angular clastic sediments witness periglacial conditions. From those angular sediments one of our Fort Hare colleagues collected an artefact, a stone implement that had been shaped and used by man during the Middle Stone Age. Hanvey and I (1991) believe that the artefact was used by man, dropped, and redeposited in the angular sediments as a result of periglacial slope processes. In other words, after the artefact had been made, climatic conditions had deteriorated, snow-masses had formed, and as they melted, solifluction took place. In order to understand the archaeological record of the area, of human occupation, retreat, and re-occupation (Opperman, 1987) one really needs to understand climatic and associated environmental changes in the region, and to synthesise the two branches of Geography.

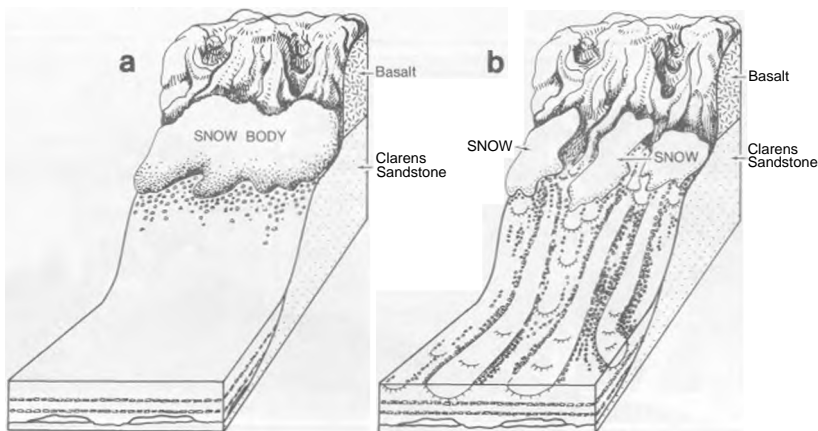


Fig. 21: Depositional model for sediment accumulation at Sonskyn, north east Cape Drakensberg.

- a) existence of a snow body with stratified deposits resulting from freeze/thaw activity and associated slope wash processes.
- b) disintegration of the snow body with associated channelised solifluction deposits. (After Hanvey and Lewis, 1991).

The cold, periglacial conditions evidenced at Sonskyn are reflected at Kilchurn, which is also in the Barkly Pass region. Sedimentological and morphological studies at Kilchurn (Lewis, 1990; Lewis and Hanvey, 1991) strongly suggest that gelifluction occurred there in the past, evidencing cold climatic conditions, in which fans were deposited on the floor of the Sterkspruit valley (Glen Orchy). Again, the landscape begins to speak. During 1990 I had the pleasure of leading a U.N.E.S.C.O. research group through the Drakensberg (Project 297; Hanvey, 1990), and was delighted that our international colleagues agreed that there is firm evidence for former permafrost and cryogenic conditions in the region.

But I have digressed, my path has strayed from the cultural to the physical landscape, and it is time to look again at the interplay between man and the landscape, which we saw only faintly at Sonskyn, and which is the core of Geography. And where better to study that interplay than in Albany, the district around Grahamstown.



Fig. 12: Sidbury, Richard Daniell's village: 'An English landlord village on African soil', after a water colour dated "12 June" (1848?) by Thomas Baines (1820-1875).

Sidbury, now much in decline, is a marvellous example of an English landlord village. Richard Daniell, founder of Sidbury, was one of the 1820 settlers, and he led his own group of settlers. Like many immigrants, he imported his own mental cultural baggage, his own world. Yi-Fu Tuan, the American geographer, has written that 'Man's world is a fabric of ideas and dreams, to some of which he manages to give visible form' (Tuan, 1967). Dreams have shaped many a landscape, from Cwm

Hyfryd, the Welsh 'paradise' in Patagonia (Williams, 1975) to Plettenberg Bay, one of the holiday and retirement 'paradises' of South Africa. Daniell attempted to give his world, his 'paradise', visible form at Sidbury, where he created an English landlord village, like those of his birthplace in Devon. For himself and his family he erected Sidbury Park, a fine Regency house set in a rolling landscape (Viney, 1987). Even the landscape was modified to suit his 'world', with woodland and a small lake being used to create an English parkland setting. Sidbury village was established for 'the workers', and its inhabitants, by the 1840s, included a blacksmith, carpenter, masons, tradesmen, labourer, shepherd, carrier, inn-keeper, and clergyman (Slater, 1982). Sidbury, therefore, fulfilled the function of an English estate village, even though established as an intrusive element on African soil. One can only understand the landscape at Sidbury if one knows something about Richard Daniell and about his cultural heritage, his ideas and his dreams.

My predecessors in the Chair of Geography at Rhodes University have all looked at landscapes. They have made major contributions to our understanding of southern African landscapes as have the other great founders of South African geography. Professor J.H. Wellington, the first Professor of Geography at the University of the Witwatersrand, will always be remembered for his two volume regional study of South Africa (1955). Professor W.J. Talbot, first Professor of Geography at the University of Cape Town, will be remembered for his pioneering Atlas of the Union

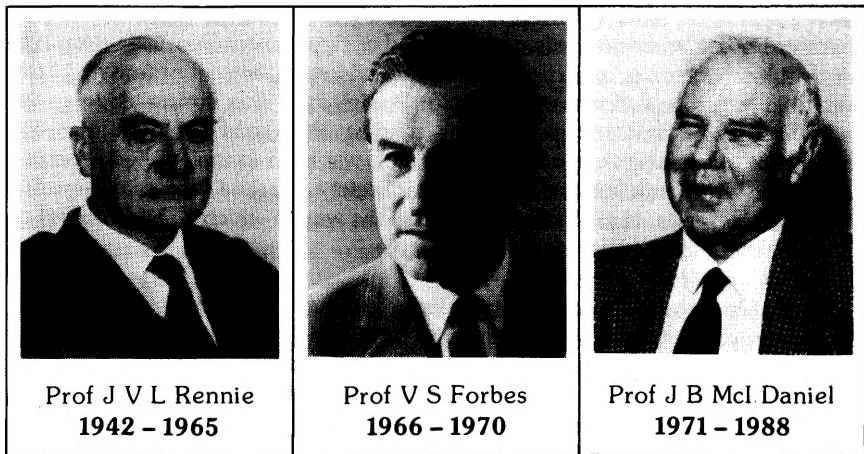


Fig. 13: Professors of Geography at Rhodes University:
 Professor Rennie (1942-1965);
 Professor Forbes (1966-1970);
 Professor Daniel (1971-1988).

of South Africa, produced jointly with his wife and the Trigonometrical Survey Office, Pretoria (1960). Other geographical founder figures in South Africa will also be remembered for their contributions.

In 1945 Professor J.V.L. Rennie, who became the first Professor of Geography at Rhodes University in 1942, showed in a memorable paper that the Eastern Province is very definitely a distinct geographical region (Rennie, 1945). One might almost term it a distinct landscape complex from that of the rest of southern Africa. To Professor Rennie my colleagues and I owe a great debt of gratitude, for, aided by the geologist, Professor Mountain, he laid the firm foundations on which Geography has developed at Rhodes University.

Professor Forbes, who succeeded to the Chair of Geography in 1966, began his academic career with a remarkable account of a valley near Fish Hoek, which was not published until 1980. The account betrays the eye of an affectionado of landscape. His subsequent research focussed on the movements of the early travellers as they explored the South African landscape (Forbes, 1965). In 1977 Professor Forbes became the fifth person to be elected a Fellow of the South African Geographical Society, and in 1989 he brought great honour on Rhodes University when the Royal Geographical Society awarded him the Society's prestigious Murchison Medal for his Geographical achievements.

Professor Daniel, who was Professor and Head of Department from 1971 until 1988, was, and happily still is, an expert at reading landscapes. My colleagues and I owe more than most people realise to Professor Daniel, for it was during his reign that the Department moved to its present fine building, that the Hydrological Research Unit was founded, and that increased attention was paid to the applied aspects of Geography. The South African Geographical Society awarded Professor Daniel the Society's Gold Medal in 1989 in recognition of the way in which he has fostered the development of his subject.

'Looking at landscapes'. Some of my younger friends might think the title of this lecture a bit old-fashioned, but Geography is, ultimately, the study of landscapes, past, present and future. As we move towards a new political situation in South Africa so it will become increasingly important that all of us are aware of landscapes. Studies of climatic change, as evidenced by landforms and sediments, might seem esoteric, but in southern Africa even a slight change of climate can have dramatic effects on the landscape and its inhabitants (Deacon and Lancaster, 1988). It is most important that we study climatic change in order, eventually, to forecast the climates of the future. The work of Tyson (1986) and other climatologists has already enabled us to forecast future wetter and drier periods over approximately ten year cycles, but there is much more that we need to know. We also need to understand geomorphological processes in southern Africa: there is little point, for example, in trying

to prevent erosion if that is part of the natural system. If, however, man's utilization of the landscape has caused or accelerated erosion, then we must be aware of the fact and take remedial action. We also need understanding and tolerance of each other and of our different cultural landscapes, the visible manifestations of our ideas and our dreams. I have spoken of Sidbuir as an example of a British 1820 Settler landscape; many other cultural landscapes exist. Unfortunately it is not always easy to identify the cultural landscapes of the past of the Khoi or even of some of the Blade peoples of southern Africa. Many of their settlements were built of biodegradable material, and little evidence of them exists. Nevertheless we must be aware of the effect that those settlers had on the landscape, and appreciate their role in transforming the wilderness. We have all made our contribution towards the development of southern Africa, and it would be as wrong to eradicate the evidence of, for example, the Zulu settlements of Mhlabatini (Chadwick, 1983) as it would be to destroy Sidbury. Equally, we need to develop the new landscapes of southern Africa in sympathy with our physical and multi-cultural inheritance.

I see the role of Geography and Geographers as crucial in the development of our subcontinent. Geographers will be needed for their knowledge of the physical landscape: what effect will a particular type of development have upon erosion, sedimentation, river flow, and so on? Equally, what resources are available for development at particular localities, and how reliable are they? Water is, perhaps, our greatest resource, and the Department of Geography takes pride in the way it has nurtured Hydrology in this University, and wishes the new Institute of Water Studies every success: we look forward to many years of fruitful co-operation between the Institute and the Department. Geographers will also be needed for their understanding of the cultural landscape, and our cultural landscapes are undergoing a process of rapid change as increasing numbers of Blacks migrate to the urban areas. How will the new urban areas be planned? What should they look like? What quality of life should they afford for their inhabitants? Urban, economic and social geographers are well qualified to advise and guide the urbanisation policies of the future and members of the Geography Department are very actively involved in urbanisation studies in co-operation with the people who are at present being urbanised. We shall also need specialists in many other fields, spatial specialists, used to handling vast quantities of data and applying it for spatial development. Geography therefore needs to be a computer conscious subject, and I thank the University for the investment that has already been made in, for example, Geographic Information System equipment. What I am trying to say is that Geography at Rhodes University must increasingly cater for the social and professional needs of southern Africa, and must produce marketable graduates who can apply their knowledge for the development of the sub-continent. This means that the Department cannot be static, and whereas the great need a few decades ago was for school teachers, and that need still exists, we must also produce urban and regional planners, water resource managers, environmental impact assessors and environmental conser-

vationists, and a multitude of computer literate and spatially aware graduates suitable for employment in many different spheres.

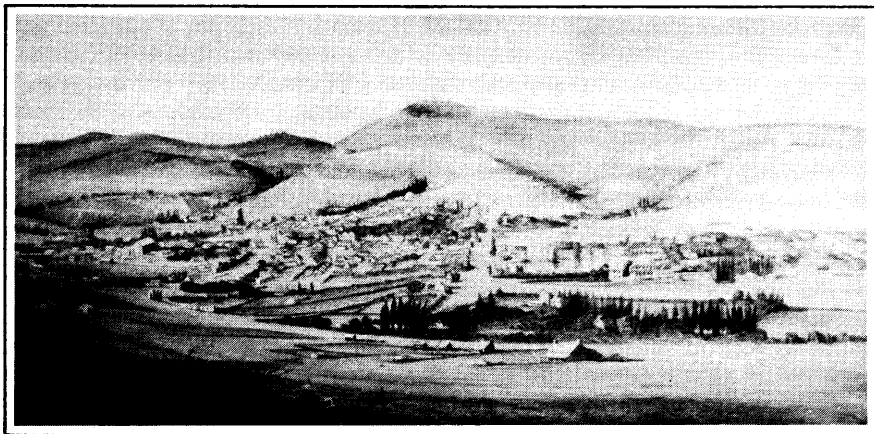


Fig. 14: Grahamstown in 1863, by Oliver Lester (1833-1892).

Landscape is an all-embracing term: hills, valleys, clouds, rivers, fields, flora, fauna, buildings, even sounds, smells, and the people themselves, form part of the landscape. Constable painted landscapes, so did Munnings. In Grahamstown we had our own landscape painters: l'Ons, Baines, Lester and many others (Diemont and Diemont, 1975; Gordon-Brown, 1952; Wallis, 1976), although their work has yet to be fully analysed geographically. Poets have praised landscapes. But perhaps it is Wilfrid Scawen Blunt who came nearest to the essence of my ideal landscape, a landscape of peace and tranquility like that which I looked at from my bedroom window in The Vicarage, and which, thankfully, still exists within a short distance of Grahamstown.

I like the calm of the early fields,
And ducks asleep by the lake,
The quiet hour which Nature yields,
Before mankind is awake

I like those things, and I like to ride,
When all the world is in bed,
To the top of the hill where the sky grows wide,
And where the sun grows red.

(The Old Squire, 1914).

Mr. Vice-Chancellor, I am deeply honoured and have great pleasure in accepting the Chair of Geography at Rhodes University.

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