

## A Hundred Years of Geography at Cambridge

D. R. Stoddart

The Geographical Journal, Vol. 155, No. 1. (Mar., 1989), pp. 24-32.

Stable URL:

http://links.jstor.org/sici?sici=0016-7398%28198903%29155%3A1%3C24%3AAHYOGA%3E2.0.CO%3B2-X

The Geographical Journal is currently published by The Royal Geographical Society (with the Institute of British Geographers).

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at http://www.jstor.org/about/terms.html. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/journals/rgs.html.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is an independent not-for-profit organization dedicated to creating and preserving a digital archive of scholarly journals. For more information regarding JSTOR, please contact support@jstor.org.

### II. A HUNDRED YEARS OF GEOGRAPHY AT CAMBRIDGE

### D. R. STODDART

MODERN GEOGRAPHY at Cambridge, as at Oxford, began with the RGS Memorandum to both Vice-Chancellors in July 1871 (Gilbert, 1971), followed by a further Memorial to them and to the Royal Commission on Oxford and Cambridge Universities in 1874. It was, however, the Keltie Report on the state of geographical education in Britain in 1885 which brought results (Wise, 1986). The President of the RGS, Sir Richard Strachey, wrote to the Cambridge Vice-Chancellor on 9 December 1886 with the Society's offer to meet the cost if the university appointed a lecturer. On 18 February 1887, just four days after the discussion at the RGS on Mackinder's paper 'On the scope and methods of geography', Strachey and others travelled to Cambridge to argue the case. A report to the university on 14 March proposed the establishment of a lectureship in geography for five years, the stipend being met by payments of £150 a year by the RGS and £50 a year by the university. The report was approved on 9 June 1887

Strachey himself initiated teaching with four public lectures on 'Principles of Geography' in February and March 1888 (Strachey, 1888a, 1888b). His principles were liberal as well as scientific, and they set the tone for later distinctive developments at Cambridge:

I therefore claim for geography . . . a place among the natural sciences, as supplying the needful medium through which to obtain a connected and consistent conception of the earth and what is on it. . . . A knowledge of the relations that subsist among living beings, which is a direct result of geographical discovery, shows us man's true place in nature; our intercourse with other races of men in other countries teaches those lessons needed to overthrow the narrow prejudices of class, colour, and opinion, which bred in isolated societies, and nourished with the pride that springs from ignorance, have too often led to crimes the more lamentable because perpetrated by men capable of the most exalted virtue.

(Strachey, 1888b: 18; 203-4).

The first lecturer, Henry Guillemard, was appointed on 12 June 1888. He had joined the RGS in 1876 after reading medicine at Caius. He was a keen ornithologist and was supported by the Professor of Zoology, Alfred Newton; his reputation had been made by an expedition to the Limpopo and the Elands River in 1877–1878 and a cruise from Kamchatka to Borneo and New Guinea in 1882–1884. When appointed he was collecting titmice in Cyprus. Soon afterwards he went to winter in Madeira, ignoring the beginning of the Michaelmas Term, and resigned when pressed to lecture. It was not an auspicious beginning.

His successor, J. Y. Buchanan, who had been chemist on the *Challenger* Expedition in 1872–1876, when he first determined the nature of manganese nodules and who later discovered submarine canyons, was appointed on 23 May 1889. His inaugural lecture in October 1889, entitled 'Geography: in its physical and environmental relations', was largely about the Argentine railways, of which he was a director; it was first published 30 years later, in 1919, by which time events had moved on. He was not an exciting lecturer: the flavour of his work may be grasped from the ponderous titles of his books—*Comptes rendus of observation and reasoning* (1917) and *Accounts rendered of work done and things seen* (1919). His annual reports to the RGS culminated with that of May 1893: '. . . in the Michaelmas Term the attendance at the lectures was very satisfactory, and one student attended the laboratory for practical work. The attendance in the present term is not so favourable' (Buchanan 1893, 27–8). And he resigned.

Prince Kropotkin's name was mentioned as a possible successor, but the vacancy was filled by H. Y. Oldham, the RGS Lecturer at Owen's College, Manchester, in June

→ Dr D. R. Stoddart is Professor of Geography and Chairman of the Department of Geography at the University of California at Berkeley. This paper was also delivered at the Centenary Celebrations in Cambridge on 2 July 1988.

1893. Oldham seems to have been a genial unexciting man, interested in the history of geographical discovery, but who published almost nothing. Nevertheless the RGS continued its financial support, and in 1898 the Lectureship was upgraded to a Readership and Oldham was elected.

The next few years saw important developments. A Board of Geographical Studies was established in February 1904, and a Diploma in Geography instituted, beginning in 1907. There was a two-part examination. Part I, which also formed a Special Examination leading to the Ordinary BA degree, had six papers: compulsory papers on physical, historical and political, and economic and commercial geography, and on cartography, and optional papers on the history of geographical discovery and ethnography. Part II included compulsory papers on regional geography and on surveying and mapping, plus two others chosen from geomorphology, oceanography and climatology, history of geography, and anthropogeography. This emphasis towards physical geography determined the flavour of Cambridge geography for many years. Those who lectured for the Diploma included A. C. Haddon, J. E. Marr, E. J. Garwood and A. R. Hinks.

Perhaps Oldham was not up to these new demands, and gradually he lost the confidence of both the university and the RGS. In 1908 he was required to vacate his Readership, in spite of the support of Sir Clements Markham. Markham's successor as RGS President, Sir George Goldie, insisted on a reorganization at Cambridge as the price of continued RGS support. Oldham took the title of RGS Lecturer in Economic Geography; A. R. Hinks (appointed Secretary of the RGS five years later) became RGS Lecturer in Survey and Cartography; and Philip Lake was brought in as RGS Lecturer in Regional or Physical Geography.

Lake at last stabilized the situation, 20 years after the first lecturer had been appointed. Then 43 years old, he had read Natural Sciences and served briefly with the Geological Survey of India. A quiet and meticulous teacher, he wrote several influential textbooks, including *Physical Geography* (1915) which went into its last edition in 1958, several times revised by members of the Cambridge Department, and the royalties from which have funded both Tripos prizes and the Philip Lake Fund for the support of graduate student's projects. Lake was appointed to a Readership in 1918, held the title RGS Reader from 1921 to 1926, and was reappointed for a further five-year term in that year. He resigned, however, in 1927.

Lake's contribution was to bring the subject in Cambridge to the point of sustained growth after generally lamentable beginnings. Key elements in this were the establishment of the Geographical Tripos, for which he must take credit, and the re-organization of the university itself in 1926. Lake's proposal for a Tripos leading to an Honours degree were made in 1918 (Lake, 1919; Davis, 1920). The examination had two parts and its structure reflected that of the old Diploma, maintaining a systematic emphasis. The first Part I examination was taken in 1920 and the first Part II in 1921, when J. A. Steers, later Professor from 1949 to 1966, was placed in Class I. The six compulsory papers in Part I were physical, political and economic, and historical geography, anthropogeography, cartography, and regional geography. The five papers in Part II were geodetic and trigonometrical surveying, geomorphology, oceanography and climatology, historical and political geography, and economic and commercial geography. Coincidentally Oldham finally retired in 1921, and, its task concluded, the RGS ended its financial support in 1923, after 35 years.

Equally important was the re-organization of the university which followed the Report of the Royal Commission on Oxford and Cambridge in 1922, and the New Statutes which came into effect on 1 October 1926. Faculty Boards replaced the old Boards of Studies. Responsibility for formal teaching was decisively moved from the colleges to the university by the introduction of University Lecturers and Demonstrators. The 183 new University Lecturers apppointed as a result in 1926 included Frank Debenham, Bernard Manning and R. W. Stanners; the 17 new University Demonstrators included J. A. Steers (who became a University Lecturer on Lake's retirement the following year). In 1923, also, women were finally admitted to titles of degrees (though not achieving parity with men until 1948) and became eligible for appointment as University Teaching Officers.

Of all the appointments made at Cambridge that of Frank Debenham (1883–1965) was probably the most significant. Debenham was an Australian who trained at Sydney as a petrologist under Edgeworth David. He had read Captain Scott's account of the Discovery expedition with enthusiasm, and was selected to join Scott's last expedition, in the Terra Nova in 1910–1913. This expedition forged his values and determined his aims. As he wrote to Scott's widow after it was over, 'Life becomes at once simpler and more real. . . . plain honesty, singleness of purpose, and the duty concept are all that really matter' (Scott Polar Research Institute [hereafter SPRI] MS 1453/74/4). In the department he translated this into a forthright pragmatism, linked to a long-term vision pursued with determination and genial good humour. Gordon Manley recalled him as vigorously active, essentially aristocratic, a man of creative temperament and cheerfully practical bent. Approval was gained in Deb's Department, no matter what you did, so long as something was measured and plotted. He was prolific in simple but effective ideas and fond of experiment. He had no illusions about himself as a scholar, and even regretted the inadequacy of his surveys in the Antarctic. How did he do it all? he was asked: 'I just mosey along', was the response (Manley, 1967, personal communication). But he inspired great affection. A student asked him what to do on an expedition. 'Just fly the flag high', said Deb: 'For him one had to', was the student's response (Richardson, 1967: 459).

The Scott Expedition generated a remarkable network at Cambridge which undoubtedly helped to ensure the department's success. Debenham succeeded Charles Wright (who was also a member of the expedition) as RGS Lecturer in Survey and Cartography in 1913. Raymond Priestley (1886–1974), who had been with Shackleton on the British Antarctic Expedition in 1907–1909 and who like Deb had been a student of Edgeworth David's in Sydney, also went with Scott and worked with Wright; Deb worked more closely in the field with Griffith Taylor, a fellow Australian and a fellow spirit in building great departments. Priestley also came back to Cambridge, to be Assistant Registrary in 1924–1927, Secretary to the General Board in 1927–1934, and Secretary-General of the Faculties in 1934–1935, before moving to higher things elsewhere: these years spanned the real establishment of Cambridge Geography. One of his sisters married Wright; another, Griffith Taylor. Deb's predecessor Hinks had also by this time become Secretary of the RGS. Another influential figure, later Master of St John's, was James Wordie, who had been with Shackleton in Endurance in 1914 and led many expeditions to the Arctic.

The significance of this was not only that the development of the subject was made possible by the close association of men of deeply shared experience, but that from the start physical geography and survey in general, and polar studies in particular exercised a dominant role. Deb seized this opportunity. He wrote to his expedition colleague Cherry-Garrard on 23 July 1919 that he had his foot on the bottom rung of the ladder at Cambridge, that 'everybody is taking an unusual interest in geography', and that 'there is bound to be a movement everywhere to try and get the whole subject brought to its proper place, and taught in the proper way' (SPRI MS 559/57/8).

While still in the Antarctic, staying in Shackleton's hut at Cape Royds in December 1912, Deb had written a memorandum on 'A Polar Institute'. In 1919 he discussed the idea with A. E. Shipley, the Master of Christ's, and long an influential supporter of geography in Cambridge. Then after his appointment Deb had the 'brain-wave' that the best memorial to Scott would be a School of Geography—'I ended by suggesting to myself why not in Cambridge, why not a decent building known as the Scott School of Geography'. Why Cambridge—because 'it is a rising school of geography (or will be when F.D. gets a decent footing)' (SPRI MS 559/57/8). Priestley, Wright, Wordie and Debenham formed a committee which formally proposed the idea to the Trustees of the Scott Memorial Fund, though by this time the Polar Institute was seen as a wing of 'the new School of Geography which is to be built here'. Deb experimented with titles: 'the Robert Falcon Scott School of Geography and Polar Research Institute', 'the Wilson Library of Geography', 'the Wilson Readership in Geography'. He was emphatic that the institute should not be the kind of place to preserve Parry's hat and Franklin's false teeth: the RGS was the proper place for that (SPRI MS 559/57/9, 30 May 1920).

The university agreed these proposals, thus tacitly accepting the need for a new

# EARLY GEOGRAPHY AT OXFORD AND CAMBRIDGE



Professor Frank Debenham

School of Geography (*Cambridge University Reporter* 20 November 1920). But the prospects of a new Geography building faded, and in May 1925 the university agreed to establish the Scott Polar Research Institute as a separate entity. It was inaugurated in May 1926, with Deb as first Director (Debenham, 1926, 1945). It moved to its present building in 1934, and for some years after 1957 was administered as a sub-department of

the Department of Geography. But during Deb's tenure he wore two hats and ran two separate institutions.

Meanwhile geography continued to be taught in a variety of temporary rooms—'various holes and corners', as R. W. Stanners (1949) recalled. These included the attics of the Sedgwick Museum (already crammed with polar specimens), the building in Downing Place (which began as a Baptist Chapel and had been used by female chemists), and the Balfour Laboratory. Then an oppportunity occurred: the School of Forestry was closed down. It occupied a handsome building at the end of Downing Place which was assigned to geography and to geology and geophysics in 1933. A substantial extension of library, lecture and other rooms was completed in 1935 and occupied the same year. Deb decorated the entrance, somewhat enigmatically, with the signs of the Zodiac. Griffith Taylor reported that the 'splendid laboratory and lecture-rooms . . . impressed me greatly: I had seen nothing to equal them elsewhere throughout my scientific career, certainly not in Sydney, nor in Chicago, nor yet in Toronto' (Taylor, 1958).

There were further developments too. In 1928 the Twelfth International Geographical Congress was held in Cambridge and attracted geographers from all over the world. The University Press published A. G. Ogilvie (ed.), *Great Britain: essays in regional geography*. These events greatly increased the stature of the subject both within the university and more widely (Darby, 1987: 121–122). In the same year the Department of Geography was formally constituted, with the Reader in Geography as its Head. In November 1930 the university recommended the establishment of a Chair in Geography. The Electors included Priestley, Hinks and Lake, as well as Tressilian Nicholas of Trinity College, who was also an Elector when Alfred Steers succeeded to the Chair in 1949 and who was still seen in Cambridge at the age of 99. Nicholas' hundredth birthday was celebrated on 17 August 1988 (ed). It could have come as no surprise that Deb was elected as first Professor in 1931. The following year the original Faculty of Geography joined forces with geology to become the Faculty of Geography and Geology.

One of Deb's achievements was the building of a Physiographic Laboratory, complete with wave tank, tidal tank and flume, in the department in 1938–1939. It was decommissioned during World War II, but then re-established. It was perhaps the first such laboratory in a British Geography Department. Deb also gave what were surely the first university courses on glaciology in the world, though most of his lectures were less esoteric (how to map through the rain forest by compass reading on your bearer's shout, for example [Debenham, 1936]). It was in the Physiographic Laboratory that W. Vaughan Lewis did his classic experiments on kaolin model glaciers and river terraces and nickpoints (Lewis, 1944; Lewis and Miller, 1955).

Much of the flavour of geography in Deb's Cambridge comes from the books he edited in the 'Teach Yourself Geography' series in 1949–1950—R. F. Peel on physical geography, W. S. Thatcher on economic geography, Margaret Anderson on the geography of living things, Jean Mitchell on historical geography, and Deb's own splendidly idiosyncratic *The Use of Geography* (1950). The copy he gave to Thatcher is inscribed 'From one old stiff to another'. It is not a sophisticated book—Deb was not a sophisticated man, in either the true or the current meaning of the word, but every word rings true.

There can be no doubt that, under Debenham, as Spate recalls, 'the Cambridge Department was perhaps the most dynamic and fertile in England. . . . our teachers were skilled and dedicated, and the place had a fine élan' (Spate, 1978: 2). The achievement was Debenham's, and Spate's assessment would be as apposite of today's department as it was of Deb's.

The war led to great difficulties. The department accommodated Bedford and Queen Mary Colleges from London. Endless courses were given for officer cadets (as they had been by Oldham in World War I: Roskill, 1963: 187–8). The Scott Polar Research Institute was taken over for intelligence work and Deb, though Director, was excluded from most of it. He resigned as Director in 1946, and retired as Professor of Geography in 1949. He built two great institutions, and in retrospect it is remarkable that his lifework received no appropriate public honour.

His successor was Alfred Steers, who had come up as an undergraduate in 1916. He took Part I of the Diploma in 1917 and Part II of the Tripos in 1921. Appointed a Departmental Demonstrator in 1922, he became a University Demonstrator in 1926 and University Lecturer the following year. He succeeded Deb in 1949 and held the chair until 1966. Steers's achievements were threefold. First, he brought a tradition of scholarly accomplishment to the department, particularly with The Coastline of England and Wales (1946), but with many other books and research papers during a long, varied and productive life (Stoddart, 1987a, 1988). He was one of the few physical geographers of his generation to pursue active fieldwork overseas (Stoddart, 1987b). Secondly, as a Fellow of St Catharine's College, he persuaded the College to institute an Entrance Scholarship in Geography—'probably one of the most important acts in the history of geography in the Universities in this country this century', as W. G. V. Balchin has described it to me. The first was awarded to O. H. K. Spate in 1930. More than 80 university teaching posts, including over 20 chairs, are now held by St Catharine's men (Steers 1983, 1987). And thirdly, he was associated with, or appointed, the men and women who made the reputation of Cambridge in the middle years of the century.

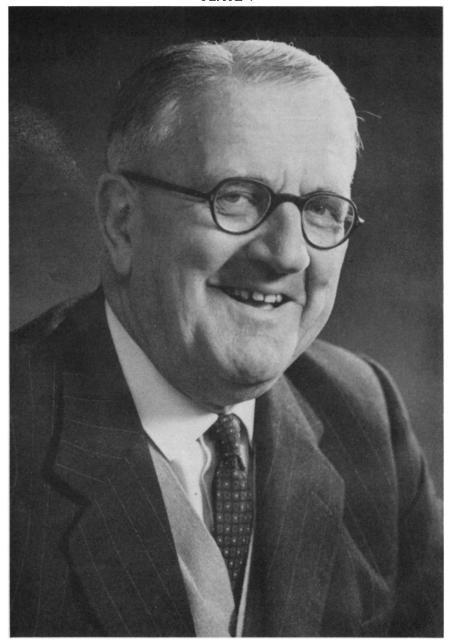
Foremost among these is, of course, H. C. Darby, a King's man and the first person to be awarded the Ph.D. degree in Geography in Cambridge in 1931 (having become a research student exactly sixty years ago). He succeeded Steers as Professor in 1966, having held a University Lectureship from 1931 to 1945. He cemented the Cambridge reputation for scholarship with his influential Historical Geography of England and Wales before 1800 (1936), and his series of books on the Fenland and on Domesday England. Happily he was knighted in the Department's centenary year. Other figures of the Cambridge tradition were Gordon Manley, who taught there from 1939 to 1948 (Tooley and Sheail, 1985), W. W. Williams (from 1938 to 1967), Harriet Wanklyn (Mrs H. G. Steers) from 1936 to 1966; Jean Mitchell (from 1945 to 1968), and W. V. Lewis, 'a man of warm and optimistic temperament', 'fertile and original, and above all imaginative' (Nicholas, 1961), who taught from 1933 to 1961, and whose impact on students (including myself) is still felt (Steers, 1961; King, 1980). A. A. L. Caesar and B. H. Farmer were appointed just before Debenham retired, A. T. Grove, B. W. Sparks and C. T. Smith soon after Steers's appointment. These people guided the department into and through the seventies, and also achieved a substantial broadening of college support for the subject.

Mention must also be made of the Committee for Aerial Photography, established in November 1949, soon after Steers became Professor. It too became a sub-department of the Department of Geography. No other university in the world provides such a facility, developed under the guidance of J. K. S. St Joseph, appointed first Curator in 1951.

I went up to Cambridge in 1956, fortunately for me at St John's College under B. H. Farmer. Fortunate too that my undergraduate years coincided with the arrival on the Cambridge scene of Peter Haggett (University Lecturer 1957–1966), and R. J. Chorley (University Lecturer 1958–1974, Reader 1970–1974, appointed to an *ad hominem* chair in 1974, and Head of Department from 1984).

The story comes to modern times. More than 60 people have held teaching posts at Cambridge since Guillemard's first abortive appointment: many of them and other Cambridge graduates have carried the Cambridge tradition to other universities (and revived the Oxford school in doing so). Some 200 students were awarded the Diploma in Geography (the last examination for which was in 1938). More than 3600 have been classed in Part II of the Geographical Tripos, of whom 300 have taken Firsts. Ten per cent of those in the First Class have been awarded marks of distinction, beginning with D. B. Grigg (St John's) in 1956. There have been nearly 200 graduate students—five in the first 50 years, 25 in the first 70 years, 62 in the last ten years. The Tripos has been repeatedly revised. Oceanography and Climatology was dropped from Part II in 1931; there was a major revision in 1952 and again in 1962 and 1967, when (a sign of the times) Cartography and Surveying in Part I became Cartography and Statistics. A three-part Tripos (Parts IA, IB and II) was approved in 1978. When Surveying disappeared (not without misgivings), Biogeography emerged, and students were given an unconstrained

## PLATE V



Professor J. A. Steers

choice of papers in Part II. But over the years, nevertheless, the structure of Cambridge teaching has held remarkably to the pattern established by the original Diploma in 1907.

Debenham and Steers made it a great and distinguished department; their successors have carried on the work. What defined its achievement? Intellectually, of course, it

has always been known for its systematic emphasis (in spite of the steady flow of major regional works by past and present Cambridge men such as B. H. Farmer, C. A. Fisher, A. T. Grove, J. H. Paterson and O. H. K. Spate). Spate with hindsight saw this as a serious limitation, allied as it was to a strong empiricism. 'The result', he says, 'was a fine meticulous scholarship stultified by a reluctance to say anything to the point, by a terror of drawing conclusions lest one also draw a mistake' (Spate, 1978: 2). Spate's colleague J. N. Jennings (1978) remembered things very differently: the real concern for and emphasis on human geography, the endless arguments about the nature of geography and its validity as a discipline, the pioneering concern for the study of processes, especially in geomorphology, and high importance given to fieldwork and field classes. Cambridge geographers were rounded geographers; even more, Cambridge was the kind of place where you were encouraged and indeed expected to find and to follow your own star.

But the significance of Cambridge was never simply academic. W. W. Williams, arguing during the Tripos revision of 1949, said that

The standard of our work is manifest in two ways; the first, and less important to my mind being the published work of the staff, and by far the most important being the calibre of the men and women we send out into the world as geographers.

Debenham would have agreed absolutely. And Debenham himself supplied the driving force that gave it all meaning, in *The Use of Geography* in 1950:

... it is a grand world we live in, full of beauty, interest and pleasing prospects. Who would not be a geographer with this whole, wide, vivid panorama as his field, places and peoples and occupations, and all the sights and sounds and smells that combine into an atmosphere peculiar to each part? ... His aim [the geographer] is to see clearly and to see whole; to climb the peak for the whole view, not to dally in the pleasant valleys below.

(Debenham, 1950: 167–8).

It is vision enough to carry the department through the next 100 years.

### Acknowledgements

I am grateful to the Librarian, Cambridge University Library, the Archivist of the Royal Geographical Society, and the Archivist of the Scott Polar Research Institute for access to and permission to quote from manuscripts in their care. I am also grateful to the late Gordon Manley and to W. W. Williams for material quoted here.

#### References

Buchanan, J. Y. 1893 Geographical education in Cambridge. Geogrl J. 2: 27-8.

Darby, H. C. 1931 *The role of the Fenland in English history*. Cambridge University Ph.D. dissertation.

- —, (ed.) 1936 An historical geography of England and Wales before 1800. Cambridge: C.U.P.
- —, 1987 On the writing of historical geography 1918–1945. In Steel, R. W. (ed.) *British Geography* 1918–1945: 117–37. Cambridge: C.U.P.

Davis, W. M. 1920 Geography at Cambridge University, England. J. Geogr. 19: 207-10.

Debenham, F. 1926 The Captain Scott Polar Research Institute. Geogrl J. 68: 43-8.

- —, 1936 Map making. London: Blackie.
- —, 1942 A laboratory for physical geography. Geogrl J. 100: 225–35.
- —, 1945 Retrospect: the Scott Polar Research Institute, 1920–45. Polar Rec. 4: 223–35.
- —, 1950 The Use of Geography. London: English Universities Press.

Gilbert, E. W. 1971 The RGS and geographical education in 1971. Geogrl J. 137: 200-202.

Jennings, J. N. 1978 Apostasy or apologetics? Confessions of a natural geographer. *Monash Publs in Geogr.* **20:** 1–39.

King, C. A. M. 1980 William Vaughan Lewis 1907–1961. Geographers Biobibliographies 4: 113–20.

Lake, P. 1919 The Geographical School at Cambridge. Geogrl Teacher, 10: 80-1.

Lewis, W. V. 1944 Stream trough experiments and terrace formation. Geol. Mag. 81: 241-53.

Lewis, W. V. and Miller, M. M. 1955 Kaolin model glaciers. J. Glaciol. 2: 533-38.

Mackinder, H. J. 1887 On the scope and methods of geography. *Proc. R. Geogrl Soc.* n.s. 9: 141–74.

Manley, G. 1967 Frank Debenham. J. Glaciol. 6: 456-9.

Nicholas, T. C. 1961 W. V. Lewis. Trinity Coll. Cambridge Annual Rec. 1961 37-39.

Richardson, E. 1967 Frank Debenham. J. Glaciol. 6: 458-9.

Roskill, S. W. 1963 The Navy at Cambridge, 1919-23. Mariner's Mirror 49: 178-93.

Spate, O. H. K. 1978 Palaeoclimates of geographical thought. Aust. Geographer 14: 1-7.

Stanners, R. W. 1949 Professor Frank Debenham, O.B.E. Compass 1: 49-52.

Steers, J. A. 1946 The coastline of England and Wales. Cambridge: C.U.P.

- —, 1961 William Vaughan Lewis. Geogrl J. 127: 386-87.
- —, 1983 Geography at St Catharine's College. Mag. St Catharine's Coll. Soc. 1983 20–23.
- -, 1987 The College during the Second World War. Mag. St Catharine's Coll. Soc. 1987 54-8.
- Stoddart, D. R. 1975 The RGS and the foundations of geography at Cambridge. *Geogrl J.* 141: 216–39. Revised and reprinted in Stoddart, D. R. 1986 *On Geography and its history:* 77–127. Oxford: Basil Blackwell.
- —, 1987a Alfred Steers: 1899-1987. A personal and departmental memoir. Cambridge: Dep. Geogr.
- —, 1987b Geographers and geomorphology in Britain between the Wars. In Steel, R. W., (ed.) *British Geography 1918–1945*: 156–76. Cambridge: C.U.P.
- —, 1988 James Alfred Steers 1899–1987. Trans. Inst. Br. Geogr. n.s. 13: 109–15.
- Strachey, R. 1888a Lectures on Geography, delivered before the University of Cambridge, 1888. *Proc. R. Geogrl Soc.* **10:** 146–60, 205–20, 220–34, 275–93.
- —, 1888b Lectures on Geography delivered before the University of Cambridge in the Lent Term, 1888. London: Macmillan.
- Taylor, T. G. 1958 Journeyman Taylor. London: Robert Hale.
- Tooley, M. J. and Sheail, G. M. 1985 The life and work of Gordon Manley. In Tooley, M. J. and Sheail, G. M. (eds) *The Climatic Scene*: 1–16. London: Allen and Unwin.
- Wise, M. J. 1986 The Scott Keltie Report 1885 and the teaching of geography in Great Britain. *Geogrl J.* 152: 367-82.