

Climatology in the Department of Geography

The Durham Department of Geography's long association with climatology began with Gordon Manley, first Head of Department from 1928 to 1939. Manley was appointed at the early age of 26 and was required to organise and conduct the teaching of geography in the Faculties of Arts and Science and to co-operate with Professor Arthur Holmes in the Department of Geology (Tooley 1985). During his time in Durham, he published papers, among others, on the climate of the northern Pennines, including the helm wind (Sheaill, Kenworthy and Tooley 1985). Later, he was widely known for his articles on weather in the former *Manchester Guardian* from 1952, copies of which are available in the Durham University library at Palace Green, and his outstanding legacy: *Climate and the British Scene* (1952) in the New Naturalist Series. He has been described as 'the best known, most prolific and most expert on the climate of Britain of his generation' (Kenworthy 2014).

In 1931, Manley became Curator of the University Observatory. He recognised the importance of the continuous meteorological record, being the second longest for a university observatory in Britain after Oxford. He wrote that:

... in this country the published tables of the Oxford record from 1815 have proved to be especially welcome. During my sojourn as Lecturer-in-Charge of the School of Geography in Durham I *resolved* (my italics) to try to place the records from the University Observatory, of which I am curator, on a similar basis. In the light of other recent work, the temperature record has been considered first.

The other work to which he referred was probably the not so 'recent' paper by John Isaac Plummer (1873), Observer from October 1867 to February 1874, who worked to make the temperature series 'strictly comparable' by adjusting temperatures made in the ventilated penthouse or north shed with those made in a Glaisher screen on the south lawn. Plummer had written that he *resolved* (my italics) to make the whole series available for comparison. Manley's early interest in the Durham University Observatory temperature series (Manley 1941) was clearly influenced by Plummer and was to begin his life's work culminating in the famous Central England Temperature Series, which continues to be regularly updated by the Climatic Research Unit at the University of East Anglia. Manley had expressed the hope of affording belated recognition of the faithful and painstaking maintenance of the meteorological record over many years by successive University Observers.

The observers had been astronomers, but from his time included a variety of people:

- Frank Sargent 1919 to December 10 1938
- E. Gluckauf December 1938 to September 1939
(as Dr Gluckauf was a registered alien, responsibility was given for a time to his deputy Mr Jacobi, with another deputy Mr O'Neil)
- A. Beecroft May 1940 to August 21 1945
- L.S. Joyce August 22 1945 to January 9 1948
- K.F. & G.A. Chackett January 1 1949 to January 6 1951
- Joyce Musgrave January 1951 to March 1957
- F. & D. Glockling March 24 1957 to 1968
- Audrey Warner 1969 to September 1999

From 1969, Mrs Warner lived in the Observatory Cottage and was employed by the University to take care of the meteorological site and make the observations at 9000hrs in winter and 1000hrs BST in summer (Kenworthy 1994). Derek Hudspeth, Departmental Superintendent (Hon. MSc Durham 2008; MBE 2009) was closely involved in maintenance of the instruments, liaison with Met Office annual inspections and making observations if needed. The Department of Geography

provided others like Dr Ray Harris (see below) and Dr Helen Goldie, who prepared returns for the Meteorological Office. The Observatory building, once entirely managed by the Department of Geography, was taken over by the Department of Physics, except for two rooms used for the meteorological work and for pollution observations. An automatic weather station was subsequently set up on the Observatory site by Professor Tim P. Burt, Department of Geography and Master of Hatfield College, who came to Durham from Oxford, where he had been in charge of the even more famous Observatory meteorological site, following C. Gordon Smith (Kenworthy, Burt and Cox 2007).

Gordon Manley's later work on the extension of the temperature series, using data from other sites to represent 'north-east England', was undertaken when he visited Durham in retirement. In 1979, when he was made an Honorary Doctor of Science, he suggested that the extended series would be his return gift to the University. Joan Kenworthy had worked for Professor Manley at Bedford College, London, in 1959-60 and he had visited Liverpool University to lecture to students taking her climatology option in the Department of Geography there. When she moved to St Mary's College, Durham, he eagerly renewed his work on an extended temperature series for the north east of England, often staying at the College and using what assistance she could give. He presented a table of interim results to the Department of Geography and recorded the progress of his work in letters, now housed with others of his papers in the archives of Palace Green Library (Kenworthy 2009). Early photographs of the current Science Site show that the Department of Geography had a meteorological site where the Bill Bryson Library, opened in 1963, now stands. Another meteorological site, used in teaching, was at Collingwood College. Climatology in the Department was given a boost by Ray Harris, Emeritus Professor of University College, London, who taught climatology in the Durham Department from 1976 and was joined by Joan Kenworthy in 1977. Ray established a local meteorological society in Durham. The local society was later adopted as a local branch of the Royal Meteorological Society and, in consequence, Joan Kenworthy was elected to the Council of the Royal Meteorological Society 1985-87. The branch is currently managed by Dr Dennis Wheeler of Sunderland. Postgraduate climatologists in the Durham Department have been Nicholas C. Pepin (Pepin 2001), later Associate Head of Research and Reader in Climate Science at Portsmouth University, who worked on long-term climate change in the Pennines, and Matthew Eglise, who used Manley's methods to extend the temperature series for the north east back to 1784 (Eglise 2003).

The Department's continuing involvement in climatology has been evident in conferences held at St Mary's College (Giles and Kenworthy 1994; Kenworthy and Walker 1997). Kenworthy and Cox obtained an award from the Leverhulme Trust in 1995 for the computerization (digitization would have been a better term) and analysis of the Durham record, which they completed with Andrew Joyce as Research Assistant.

The teaching of elementary meteorology and climatology in geography departments is now somewhat outmoded [\[1\]](#), given the need for qualifications in mathematics and physics to work on computer models, but Professor Tim Burt continued Departmental interest in the atmosphere through his management of the Observatory site, his teaching of hydrology and his work on the Durham rainfall record.

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Jehuda Neumann Memorial Prize of the Royal Meteorological Society, 2015.

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[1] **Editor's Note:** Climate is still a key part of research at Durham Geography and is integral to our curriculum, but with an increased emphasis on changes in climate - past, present and future - and on climate impacts. At the time of writing, 1st year students will learn about climate in the *Physical Geography* module, we run a 2nd year module for Physical and Human Geography students, called *Climate Change: Geographical Perspectives*, which discuss climate change, impacts and the governance of climate change, and a large range of modules talk about climate change in the past, and in other modules the climate of particular regions such as the Low Latitudes or Antarctica is discussed. We even have recently taught a module on Mars where climate is discussed!