### OBITUARY



### JOHN CHALLINOR (1894-1990) Honorary Member of the East Midlands Geological Society

When the Council of the East Midlands Geological Society inaugurated its Honorary Memberships, the principal criterion for selection for this honour was that the person concerned should have contributed significantly to knowledge of the geology of midland England. Two names came immediately to mind; those of Leonard Johnston Wills and John Challinor. Both gentlemen were elected, as our first Honorary Members, at the Annual Meeting on 4th February 1967. Both, by coincidence, were known to their intimates as "Jack". Both lived long enough to enjoy the benefits of Honorary Membership for a substantial time. Professor Wills died in 1979, at the age of 95; and we must now mourn John Challinor also, following his death on 26th August 1990 at the age of 95.

John was born a Midlander, on 30th November 1894 at Leek in Staffordshire. His family was distinguished enough to figure in *Burke's Landed Gentry* (1954 edition). His father was a pottery manufacturer and a collector of fossils, which were kept carefully in their own cabinet; and John was soon also collecting fossils, notably from the banks of the River Avon near Malvern. This growing interest in the Earth's past history was encouraged in his schooldays at Wellington College, where the principal science master, Mr. Blundell, gave

a two-term course in Geology — a subject which, at that time, figured even more rarely in school curricula than it does today.

Consequently, when John went as a student to Trinity College, Cambridge, he was already bent upon a geological career. Though the Woodwardian Professor at the Sedgwick Museum, the stratigrapher and structural geologist Thomas McKenny Hughes, was by then over 80 and lectured only rarely, John was taught by a truly distinguished roster of geologists. The igneous and metamorphic petrologists Alfred Harker and Robert H. Rastall, the stratigrapher and sedimentologist John E. Marr and the palaeontologist Henry Woods were most prominent among the geologists whose lectures he attended, but he received valuable instruction also from the venerable petrologist and geomorphologist Thomas G. Bonney, the palaeobotanists E. A. Newell Arber and Albert C. Seward, "graptolite queen" Gertrude Elles and the Museum's Curator, F. R. Cowper Reed. In particular he benefited from the enthusiasm of his youthful tutor at Trinity, T. C. Nicholas, with whom he was to develop a warm personal friendship. It was Nicholas who, on an excursion to Caernarvonshire, introduced John to the geology of Wales, destined to be a major future concern. When John graduated, he had acquired an unusually wide range of geological knowledge, equipping him admirably for the wide range of courses he was to be required to present during his career.

The beginning of that career was delayed by two years of army service (1917-1918). After discharge, he gave some classes at Cambridge while seeking a permanent position. In October 1919 he was appointed probationary Assistant Lecturer and Demonstrator in Geology at the University College of Wales, Aberystwyth.

At the time of John's appointment — and indeed, until postwar expansion began in the 1950's — this was a small department with only three members of faculty. Its Professor was the Welsh stratigrapher William J. Pugh, destined ultimately to direct H.M. Geological Survey of Great Britain and to receive a knighthood; his particular interest was in the stratigraphy and structure of Wales. Palaeontology was taught by Stanley Smith; and John's initial task was to teach petrology. However, when Smith left in 1920 to an appointment at Bedford College, London, John was able to take over his responsibilities, petrology being taught thereafter by Smith's successor J. I. Platt, with whom John was to co-author his first book Simple geological structures: a series of notes and exercises (1930 and three later editions).

John was to spend the rest of his working career at Aberystwyth, serving also under Herbert P. Lewis and Alan Wood and being in due course appointed Senior Lecturer. With a teaching staff so small, however, John's lecturing and administrative duties remained heavy; on several occasions, he was required to serve as acting Head of Department during the professor's absence. He retired from teaching, though by no means from research, in 1960.

The facilities for geology at Aberystwyth were initially

very poor. As A. R. Wyatt (1991), has described them: Even the professor had no room entirely to himself, and it was only by rearranging some of the specimens that Challinor managed to secure himself a drawer to keep his personal possessions!

Despite these disadvantages and his heavy teaching and administrative commitments, John contrived to find both time and energy for a wide range of researches. He concerned himself with the stratigraphy and geomorphology of two particular regions: Wales in general (and Cardiganshire in particular) and his native region, north Staffordshire. His earliest paper (1921) was on the geology of the Roches district, as were two later notices (1924, 1930b); he also mapped the Mixon district (1928d) and assembled a valuable series of bibliographies of north Staffordshire geology (1946a, 1949d, 1950, 1951a, 1957, 1978e). For this work, the North Staffordshire Field Club awarded him their Gardner Medal in 1946.

His other researches ranged widely. John examined the vexed questions of the Longmyndian (Precambrian) rocks of Shropshire (1948a) and the "Red Rock Fault" of Cheshire (1965, 1978b). His geomorphological writings began with an account of river features near Rushton in Staffordshire, but extended to embrace many aspects of coastal and riverine erosion (1929b, 1930a, 1930c, 1931, 1932, 1933a, 1946a, 1947c, 1948c, 1949a, b, 1966b, 1968c). He had a profound concern with structural geology, writing on the detailed structure of faults (1933b, 1946b) and folds (1944, 1945a, 1947d), investigating the origin of problematic structures (1926, 1949b) and striving to account for curious marks in rocks (1928a, 1929b). His palaeontological writings included the reporting of a shelly band in graptolitic shales (1928b), the study of a graptolite lineage (1945b), considerations of the usage of the terms "cast" and "mould" (1978a) and of approaches to naming fossils (1966), and a popular account of "Fossils in Wales" (1955b). He wrote also on techniques of geological photography (1968d). His book Geology Explained in North Wales, written jointly with Dennis Bates (1973), outlined entertainingly the principal features of the area he had come to know so

Yet it is not for any of these above concerns that John Challinor will be most remembered. Instead, it is through his work on the history of geology and its lexicography. This began fittingly with two studies of the work in Staffordshire of Dr. Robert Plot, one of England's earliest students of fossils (1945c, 1947f). As John's personal collection of works on the history of geology grew, however, his interests widened: a long sequence of studies resulted, the most important of which were his examinations of the work and correspondence of geologist Thomas Webster (1949c, 1961-1964), his studies of the history of British palaeontology (1948d, 1955a, 1967b) and of Johnathan Otley's work in the Lake District (1951c), his examination of Darwin's palaeontological researches (1959) and his series of studies of the early development of geology in Britain (1947c, 1953, 1954a, b, 1970c), culminating in The History of British Geology, A Bibliographical Study (1971b). His A Dictionary of

Geology appeared first in 1961 and, in retirement, he was to see it through five further editions, the latest (1986) being edited by A. R. Wyatt. In addition, he contributed many brief biographies of distinguished geologists to other dictionaries (1969a, 1971a, 1972a, 1973a, 1974a, b, 1975a, b, 1976a). His last works were a history of the study of the Precambrian in Wales (1979a), and a last bibliography of north Staffordshire geology (1979b).

In 1928, John married Mary Winnifred Atkins, daughter of the Professor of English at Aberystwyth. They had no children, but their marriage was a long and happy one. They shared a strong interest in classical music. In an anonymous obituary (1990), it was noted that:

In their middle years, the couple were renowned for the musical evenings that they gave at their home. One visitor recalled that excellent gramophone concerts would accompany dinner: an overture before the soup, a major work with the main course and popular items with the pudding. A passable pianist himself, Challinor had a wide collection of records, from which he would make selections for his guests.

The couple also collected paintings and John, always a keen and highly competent photographer, had assembled a fine collection of prints mostly with geological themes. He was also an able and knowledgeable botanist.

Winnifred's death in 1979, and a mild heart attack that followed (John was by then in his mid-eighties) brought John's geological and historical researches to an end. Their paintings, and many of John's photographic prints, were presented to the National Library of Wales. John's library, which contained many rare geological works, was given to the Hugh Owen Library of the University College of Wales.

John Challinor's diverse contributions to our science, in research, through his students and through his writings, will not be forgotten.

#### Acknowedgements

I am indebted to Dr. David J. Batten, and in particular to Dr. Antony R. Wyatt, of the University College of Wales, Aberystwyth, for supplying much of the data upon which this notice is based. The bibliography of his writings was largely prepared, and courteously supplied to me, by Dr. Wyatt.

#### Photograph

The portrait photograph is from the collection of the East Midland Geological Society and was taken at the time of his election as Honorary Member of the Society.

#### References

# A. PUBLISHED WORKS BY JOHN CHALLINOR: BOOKS AND PAPERS

CHALLINOR, J.

- 1921 Notes on the geology of the Roches District. Transactions and Annual Report, North Staffordshire Field Club, 55, 76-87.
- 1924 Farey's Grit. Geological Magazine, 61, 423-427.
- On some curious marks on a rock surface. *Geological Magazine*, **63**, 341-343.

- 1927a Further note on the age of the rocks around the Teifi estuary. Geological Magazine, 64, 322-324.
- River features near Rushton, Staffordshire. Transactions, North Staffordshire Field Club, 61, 120-121.
- 1928a Curious rock marks from Transbaikalia. Geological Magazine, 65, 241-244.
- 1928b A shelly band in graptolitic shales. Geological Magazine, 65, 364-368.
- 1928c The terms "cast" and "mould" in palaeontology. Geological Magazine, **65**, 410-412.
- 1928d Notes on the geology of the Mixon District. Transactions, North Staffordshire Field Club, 62, 96-109.
- 1928e The geological map of Wales: a geographical review. Geography, 14, 511-514.
- 1929a Notes on the geology of the North Staffordshire Moorlands. Transactions, North Staffordshire Field Club, 63, 111-113.
- 1929b Further curious rock-marks from the Cardiganshire coast. Geological Magazine, 66, 354-356.
- 1930a The curve of stream erosion. Geological Magazine, 67, 61-67.
- The stratigraphical position of the Roches "Rough Rock". Transactions, North Staffordshire Field Club, 64, 41-43.
- 1930c The hill-top surface of North Cardiganshire. Geography, 15, 651-657.
- 1931 Some coastal features of North Cardiganshire. Geological Magazine, 68, 111-121.
- 1932 River-terraces as normal features of valley development. Geography, 17, 141-147.
- The "incised meanders" near Ponterwyd, Cardiganshire. 1933 Geological Magazine, 70, 90-92.
- The "throw" of a fault, with illustrations from the Aberystwyth 1933b Grits. Geological Magazine, 70, 385-393.
- 1944 A note on tilted folds and direction of pitch. Proceedings of the Geologists' Association, 55, 95-98.
- The primary and secondary elements of a fold. Proceedings of the Geologists' Association, 56, 82-88.
- A graptolite lineage from North Cardiganshire. Geological Magazine, 82, 97-106.
- Dr. Plot and Staffordshire Geology. Transactions, North 1945c Staffordshire Field Club, **79**, 29-67.
- Two contrasted types of alluvial deposit: with an illustration from the Rheidol Valley, Cardiganshire. Geological Magazine, 83, 162-164.
- 1946b The primary and secondary elements of a fault. Proceedings of the Geologists' Association, 57, 153-160.
- Literature relating to the geology, mineralogy and palaeontology of North Staffordshire (1932-1945). Transactions, North Staffordshire Field Club, 80, 21-24.
- Professor H. P. Lewis (obituary). Nature, London, 159, 223.
- Professor H. P. Lewis (obituary). Proceedings of the Geologists' Association, 59, 55.
- The physiography of the two localities Ponterwyd and Devil's Bridge. (In report of the Centenary Meeting.) Archaeologia Cambrensis, 99, 139-140.
- A remarkable example of superficial folding due to glacial drag,
- near Aberystwyth. *Geological Magazine*, **84**, 270-272. 1947e From Whitehurst's "Inquiry" to Farey's "Derbyshire": a chapter in the history of English geology. Transactions, North Staffordshire Field Club, 81, 52-88.
- Note on the paper "Dr. Plot and Staffordshire Geology". 1947f Transactions, North Staffordshire Field Club, 81, 156.
- New evidence concerning the original order of deposition of the 1948a Longmyndian rocks. Geological Magazine, 85, 107-109.
- 1948b The beginnings of scientific palaeontology in Britain. Annals of Science, **6**, 46-53.
- A note of convex erosion-slopes, with special references to North Cardiganshire. Geography, 33, 27-31.1948c
- A principle in coastal geomorphology. Geography, 34, 212-215.
- The origin of certain rock structures near Aberystwyth. Proceedings of the Geologists' Association, 60, 48-53.
- Thomas Webster's observations on the geology of the Isle of Wight, 1811-13. Proceedings, Isle of Wight Natural History and Archaeology Society, 4, 108-122.
- 1949d North Staffordshire Geology 1811-1948. The progress of research and a short guide to the literature (first instalment). Transactions, North Staffordshire Field Club, 83, A1-A26.
- 1950 North Staffordshire Geology 1811-1948 (second instalment). Transactions, North Staffordshire Field Club, 84, A27-A48.

- 1951a North Staffordshire Geology 1811-1948 (third and final instalment). Transactions, North Staffordshire Field Club, 85, A49-A64.
- 1951b Geological research in Cardiganshire, 1842-1949. Ceredigion, 1, 144-176.
- 1951c Jonathan Otley's "Geology of the Lake District". North Western Naturalist, 23 (1948), 113-126.
- The early progress of British Geology; I, from Leland to Woodward 1538-1728. Annals of Science, 9, 124-153.
- The early progress of British Geology; II, from Strachey to 1954a Michell 1719-1788. Annals of Science, 10, 1-19.
- 1954b The early progress of British Geology; III, from Hutton to Playfair 1788-1802. Annals of Science, 10, 107-148.
- 1955a A list of works, published in the present century, in which are recorded the occurrence of fossils in Wales. North Western Naturalist, new series, 3, 193-209.
- Fossils in Wales. Nature in Wales, 1, 1-3.
- Literature relating to the geology of North Staffordshire 1957 (1946-1955). Transactions, North Staffordshire Field Club, 90, 41-45.
- 1959 Palaeontology and evolution. In Bell, P. (ed.), Darwin's biological work; some aspects reconsidered, 50-100. Cambridge University Press, Cambridge.
- A Dictionary of Geology. University of Wales Press, Cardiff xv 1961 + 235pp. (1st edition). (Also published 1962, Oxford University Press, New York.)
- 1961-64 Some correspondence of Thomas Webster, geologist (1773-1844). Annals of Science, 17, 175-195; 18, 147-175; 19, 49-79, 285-297; **20**, 59-80, 143-164.
- A Dictionary of Geology. University of Wales Press, Cardiff; Oxford University Press, New York. xv + 289pp. (2nd edition).
- 1964b Calcareous rocks and calcicole plants. Nature in Wales, 9, 96.
- The "Red Rock Fault". Geological Magazine, 102, 178-179. 1965
- Naming fossil specimens. Welsh Geological Quarterly, 1, 7-8. 1966a
- 1966b Fault scarp or fault-line scarp? Geological Magazine, 103, 366.
- 1967a A Dictionary of Geology. University of Wales Press, Cardiff; xv 298pp. (3rd edition).
- 1967b A brief review of discoveries in British palaeontology. Welsh Geological Quarterly 2, 3-11.
- 1968a Uniformitarianism — the fundamental principle of geology. Report of the International Geological Congress, 23rd session, 13, 331-343.
- 1968b The Rheidol Gorge, north Cardiganshire. Amateur Geologist, 3, 6-11.
- 1968c A note on outdoor geological photography. Amateur Geologist, **3**, 19-20.
- Brongniart; De La Beche; Geikie, A.; Hall; Holmes, A.; Hutton; 1969a Lapworth; Lyell; Murchison; Playfair; Sedgwick; Smith, W.; Steno; Werner, A. G. In Williams, T.I. (ed.), A Biographical Dictionary of Scientists. A. & C. Black Ltd., London, 592pp. (pp. 83, 137-138, 211-212, 237, 263-264, 271-272, 310, 343-344, 382, 420-421, 467-468, 480, 493, 551).
- 1969b Geological research in Cardiganshire, 1842-1967. Welsh Geological Quarterly, 4, 3-37.
- 1970a A logical approach. Geology, 2, 50-54.
- 1970b A note on the interpretation of certain geological boundaries: unconformity or fault? Amateur Geologist, 5, 16-18.
- The progress of British geology during the early part of the nineteenth century. Annals of Science, 26, 177-234.
- 1970d At a not too solemn demonstration. (Verses) Nature in Wales, 12, 96-98.
- 1971a Falconer, Hugh; Faujas De Saint-Ford, Barthelemy. In Gillispie, C. C. (ed.), Dictionary of Scientific Biography, Vol. 4, 518-519; 548-549. Charles Scribner's Sons, New York.
- 1971b The History of British Geology. A Bibliographical Study. David & Charles, Newton Abbot, Devon, 224pp.
- Geikie, Archibald; Geikie, James. In Gillispie, C. C. (ed.), Dictionary of Scientific Biography, Vol. 5, 333-339. Charles Scribner's Sons, New York.
- 1972b At the foot of Constitution Hill, Aberysywyth. Amateur Geologist, 6, 18-25.
- 1973a Harker, Alfred. In Gillispie, C. C. (ed.). Dictionary of Scientific Biography, Vol. 6, 116. Charles Scribner's Sons, New York.
- 1973b A Dictionary of Geology. University of Wales Press, Cardiff, xvii + 350pp. (4th edition).
- Lapworth, Charles. In Gillispie, C. C. (ed.), Dictionary of Scientific Biography, Vol. 8, 32-34. Charles Scribner's Sons, New York.

- 1974b Mantell, Gideon Algernon. In Gillispie, C. C. (ed.), Dictionary of Scientific Biography, Vol. 9, 86-87. Charles Scribner's Sons, New York.
- 1975a Newton, Edwin Tulley; Owen, George. In Gillispie, C. C. (ed.),
  Dictionary of Scientific Biography, Vol. 10, 40-41, 259-260. Charles
  Scribner's Sons, New York.
- 1975b Playfair, John; Prestwich, Joseph. In Gillispie, C. C. (ed.), Dictionary of Scientific Biography, Vol. 11, 34-36, 130-131. Charles Scribner's Sons, New York.
- 1976a Webster, Thomas; Whitehurst, John. In Gillispie, C. C. (ed.), Dictionary of Scientific Biography, Vol. 12, 210-211, 311-312. Charles Scribner's Sons, New York.
- 1976b The "Precambrian" in Cambria. Geological Magazine, 13, 449-456.
- 1977 The definition of geology. Mercian Geologist, 6, 171-177.
- 1978a A Dictionary of Geology, University of Wales Press, Cardiff, xvii + 365pp. (5th edition).
- 1978b The "Red Rock Fault", Cheshire; a critical review. Geological Journal, 13, 1-9.
- 1978c A brief review of some aspects of geomorphology in England and Wales. *Mercian Geologist*, **6**, 283-290.
- 1978d Curious markings on bedding surfaces. Geological Magazine, 15,
- 1978e Literature relating to the geology, mineralogy and palaeontology of North Staffordshire. North Staffordshire Journal of Field Studies, 18, 14-20.
- 1979a History of the study of the "Pre-Cambrian" in Wales. In Kupsch, W. O. and Sarjeant, W. A. S. (eds), History of concepts in Precambrian geology. Geological Association of Canada Special Paper 19, 33-49.
- 1986 Challinor's Dictionary of Geology. A. R. Wyatt, Editor. University of Wales Press, Cardiff, xviii + 374pp. (6th edition).
- CHALLINOR, J. and BATES, D. E. B.
- 1973 Geology explained in North Wales. David & Charles, Newton Abbot, Devon. 214pp.
- CHALLINOR, J, and PLATT, J. I.
- 1969 O. T. Jones and W. J. Pugh: some personal reminiscences. In Wood, A. (ed.), The Pre-Cambrian and Lower Palaeozoic Rocks of Wales. Report of a symposium held at the University College of Wales Aberystwyth, in honour of Professor O. T. Jones and Sir William Pugh. University of Wales Press, Cardiff, pp. vii-viii.
- CHALLINOR, J. and WILLIAMS, K. E.
- 1926 On some curious marks on a rock surface. *Geological Magazine*, **63**, 341-343.
- PLATT, J. I. and CHALLINOR, J.
- 1930 Simple geological structures: a series of notes and map exercises. Thos. Murby and Co., London, 56pp.
- 1940 Simple geological structures: a series of notes and map exercises. Thos. Murby and Co., London, 56pp. (2nd edition).
- 1956 Simple geological structures: a series of notes and map exercises. Thos. Murby and Co., London, 55pp. (3rd edition).
- 1968 Simple geological structures: a series of notes and map exercises; Thos. Murby and Co., London, 56pp. (4th edition).

## B: PUBLISHED WORKS BY JOHN CHALLINOR: BOOK REVIEWS

- 1925 The Geology of Yorkshire (Kendall, P. F. and Wroot, H. E.). The Geographical Teacher (Geography), 13, 84.
- 1927 Physico-Chemical Geology (Rastall, R. H.). Geography, 14, 254.
- 1928 Stories in Stone (Lee, T.). Geography, 14, 368.
- 1928 The Geology of the Country around Wrexham, Part I. (Wedd, C. B. et al.). Geography, 14, 377.
- 1929 Classified Geological Photographs from the Collection of the Geological Survey of Great Britain. *Geography*, 15, 73.
- 1929 Stratigraphical Palaeontology (Neaverson, E.). Geography, 15, 83.
- 1929 The Geology of the Country around Wrexham, Part II (Wedd, C. B. et al.). Geography, 15, 84.
- 1929 The Coral Reef Problem (Davis, W. Morris). Geography, 15, 166.
- 1965 Hydrogeology (Lamarck, J. B.; translated by Carozzi, A. V.). Geological Magazine, 102, 280.
- 1965 The History of the Study of Landforms, volume 1 (Chorley, R. J. et al.). Geological Magazine, 102, 280-281.
- 1967 Water, Weather and Prehistory (Raikes, R.). Times Literary Supplement, September 28, 1967, p. 886.
- 1970 Towards a History of Geology (Schneer, C. J. ed.). Nature, London, 227, 526.

- 1970 Telliamed (Benoît de Maillet; translated and edited by Carozzi, A. V.). Endeavour, 29, 100.
- 1973 Charles Lyell: the Years to 1841 (Wilson, L. R.). Annals of Science, 30, 365-367.
- 1973 Wallace and Natural Selection (McKinney, H. L.). Annals of Science, 30, 367-368.
- 1974 The History of the Study of Landforms, volume 2 (Chorley, R. J. et al.). Geological Magazine, 111, 463-464.

#### C: JOHN CHALLINOR: OBITUARY NOTICES

Anon.

- 1990 "Jack" Challinor. Daily Telegraph, London, Saturday, September 1, p. 13.
- WYATT, A. R.
- John Challinor. Independent, London, Saturday, September 1.
   Mr. J. Challinor (1894-1990). Annual Report, Geological Society of London for 1990.

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(Photograph taken at the time of his election as Honorary Member of the East Midlands Geological Society.)

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