JOHN KNIGHT FOTHERINGHAM

1874–1936

JOHN KNIGHT FOTHERINGHAM was born at Tottenham, Middlesex, on 14 August 1874, the feast-day, by odd coincidence, of Saint Eusebius, *not* the historian. His father, the Reverend David Fotheringham (1830–1918), was of a Forfarshire family, minister of the Presbyterian Church at Glanton, Northumberland (1859–65), and afterwards at St. John's Presbyterian Church, Tottenham (1865–1905), where he was a Justice of the Peace from 1895 to his death. He was Moderator of the Synod of the Presbyterian Church of England in 1912. His wife, Jane (1834–1917), the daughter of George Ross, Master of the Lancasterian School at Tottenham, whom she helped there till her marriage in 1869. She bore three sons, David Ross (1872, Vicar of Charing, Kent), John Knight (1874, named from his father's mother Barbara Knight), and Alexander (1876–1932), formerly a Judge in the Indian Civil Service, and later a barrister and solicitor in Auckland, N.Z., and assistant lecturer in law at the University College there.

A delicate child, and for forty years a sufferer from a chronic ailment, John Knight was fortunate in his liberal and intellectual home, his early schooling in connexion with his father's church, and his training under Abbott and Rushbrooke at the City of London School, whence he came with a leaving scholarship, and an exhibition to Merton College (1892). At Oxford he was in the second class in Honour Moderations (1894), and in the first class in Greats (1896) and in Modern History (1897). Merton contemporaries write of 'his amazing knowledge, his humility, and long-suffering of our foolishness', and of the affection for him among his juniors. The writer of these lines made his acquaintance in the rifle-corps, where he was a

marksman; his meticulous preparations for each shot on the range amused, without always succeeding. As a Senior Demy of Magdalen (1898–1902) he spent one session at the British School of Archaeology at Athens, but was already extending his knowledge of mathematics and astronomy, while he took pupils at Oxford, and looked out for other work. To this period belong his first published works (1903), 'The formation of the Julian calendar with reference to the astronomical year' (*J. Phil.* xxix. 87–99) and 'The date of the Crucifixion' (*J. Phil.* xxix. 100–18): to the latter problem he returned in 1910 (*J. Theol. Stud.* xii. 120–7).

In 1903 his marriage with Mary Eleanor, daughter of the late Joseph Atkinson, of Crosby Garrett, Westmorland, began a happy and lifelong partnership in his many interests; long walks, and longer journeys to European libraries; the collations, indexes, and photography incidental to the study of manuscripts; quiet participation in social and confessional service.

In 1904 Fotheringham became lecturer in classical literature at University College, London; in 1909 he was appointed lecturer in Ancient History, and in 1912 Reader in Ancient History in the University of London. This post he held till 1920, though during the War years duties and salary were in suspense. Though he lived for a while at Muswell Hill, Oxford remained his real home, and railway travel to and from London must have been a serious tax on his strength and resources. But there seems to have been no opening for him as a teacher in Oxford. *Literae Humaniores* are mysteriously inhumane.

To these years belong two publications which illustrate the width of his interests and equipment, and also the necessity of taking work where he could find it. The eleventh volume (1801–37) of Longman's *Political History of England* (of which William Hunt and Reginald Lane Poole were editors) had been undertaken by the Hon. G. C. Brodrick, Warden of Merton. Brodrick invited Fothering-

ham to relieve him of three chapters on foreign policy; and on Brodrick's death in 1903 there was also to be completed the final chapter on 'Literature and Social Progress', and the whole book had to be 'recast in order to meet the plan of the series'. 'Scrupulous in retaining the expression of Dr. Brodrick's views, and, where possible, his words' as the prefatory note declares, Fotheringham cannot have found this additional labour easy; but the volume was on the whole well received, and some reviewers selected for praise the chapters on foreign history. American critics expressed surprise that British historians could write about trans-atlantic events so fairly. The book went to a second edition in 1911.

Rather later (1910) an article on 'Genoa and the Fourth Crusade' (*Engl. Hist. Rev.* xxv. 16–27) was the prelude to a life of *Marco Sanudo*, in collaboration with L. F. R. Williams (Clarendon Press, 1915), the 'exhaustive and vigorous' treatment of which rested on wide acquaintance with French, Italian, and Byzantine sources, and received warm welcome from authorities such as Bréhier (*Journ. des Savants*, Aug. 1916). It was Fotheringham's last excursion into history outside his special studies; for he had already found a fresh and very fruitful field of astronomical research.

But among these byways and excursions Fotheringham's main studies produced a steady flow of published work. Several papers (1908–13) deal with calendar dates in the Aramaic papyri from Assuan; others with Hipparchus, Cleostratus, and Ptolemy, the technique of naked-eye observations, and the secular acceleration of sun and moon. In 1905 appeared his edition of *The Bodleian Manuscript of Jerome's Version of the Chronicle of Eusebius*, reproduced in collotype and published by the Clarendon Press. The introduction, though of only 65 pages, gives the curious history of the manuscript, an estimate of its place among the older texts of the *Chronicle*, and reconstructions of Jerome's edition and of the original work of Eusebius; it is followed by appendixes by R. L. Poole and C. H. Turner, who had

encouraged Fotheringham to undertake the publication 'in partial discharge of his duty as a Senior Demy of Magdalen College' (*v.* above). The collation of other manuscripts of the *Chronicle*, scattered all over Europe, had already occupied several years.

The reception of the book is exemplified by the masterly review by Schwartz (*Berl. Phil. Woch.*, 1906, 16 June) and by the notices of Harnack (*Theol. Lit.-Zeit.*) and Lejay (*Rev. Crit. Hist. Lit.*, Louvain), all of whom outlined a programme of further research, which in due time Fotheringham himself achieved. His work on Eusebius, with earlier papers, admitted him to the Doctorate of Letters in 1908; and the distinguished scholar who presented him put off a journey in order to do so. He was, indeed, already recognized as the leading successor of Schoene, whose great edition (1875) suffered from neglect of the Bodleian MS., and undue reliance on an inferior manuscript at Berne.

Obviously the publication of a single manuscript, however important, was but the first step towards a critical edition. Schoene had realized the value of the Bodleian MS. too late for his own book; and in his supplementary essay *Die Weltchronik des Eusebius in ihrer Bearbeitung durch Hieronymus* (1900) he had tried to explain the condition of the text by the theory that Jerome had published more than one edition. Schwartz, in Pauly-Wissowa, vi, s.v. 'Eusebius' (1909), thought that Eusebius' work had been interpolated before it came to Jerome. In 1911 Karst retranslated the Armenian version for the Berlin *Eusebius*; Rudolf Helm, in 1913, published a text for the Berlin Academy, but neglected some of the better manuscripts. Traube (1902) had printed in facsimile the Fleury fragments, scattered in Leyden, Paris, and the Vatican, but there was no full collation even of most of the earlier manuscripts.

Fotheringham's reputation as a scholar of exceptional attainments being now fully established, Magdalen College elected him in 1909 to a Fellowship to enable him to concentrate his attention on this definitive edition, with the

constant encouragement of the President, Sir Herbert Warren, and unfailing help, as before, of Reginald Poole and Cuthbert Hamilton Turner. Most of the collations were completed, and the introduction had been written, in 1917; but the work had outlasted the Fellowship, the War suspended the emoluments as well as the duties of his London Readership, his War work was terminated by ill health, and it was not till 1923 that he was able to announce *Eusebii Chronici Canones, latine vertit Hieronymus*, printed, very carefully, by Adolf Holzhausen in Vienna, though published by Humphrey Milford. Part of the heavy expense was met by grants from the University of Oxford and from Magdalen College; the rest by Fotheringham himself and his wife, whose assistance throughout is eloquently commemorated in the preface. To relieve the critical apparatus of minute details, and supplement the photographic editions of the Bodleian MS. and the Fleury fragments, full photographic copies of eleven principal manuscripts were deposited in the Bodleian Library.

With Fotheringham's edition, the study of Eusebius' *Chronicle* and of ancient chronology in general, passes into a new phase. He had established the palaeographical descent of the sixteen most reputable texts, and the primacy among them of the fifth-century Bodleian MS., though the Fleury fragments, so far as they go, are probably the closest reproduction of the fourth-century archetype. He had recovered, in most of its details, the original form and appearance of the *Canones*; restricted the labours of Eusebius and of Jerome to a single edition each; and printed what may be regarded as the definitive text of an exceedingly complex and difficult document.

The publication of his *Eusebius* set Fotheringham free for inquiries of a very different kind, which had already long interested him. Two circumstances contributed to this change of outlook. His astronomical studies had brought him into close touch with the Savilian Professor, H. H. Turner. As early as 1908 we have a glimpse of him 'rushing

round, terribly excited about some discovery', to Turner's house—and in 1918 it was Turner who came to his aid with the offer of a post as assistant in the University Observatory. The salary was small, but better than nothing, and from time to time Turner contrived to increase it. He secured also Fotheringham's appointment as Halley Lecturer in 1921. The lecture, on *Historical Eclipses*, contained much original work supplementing the pioneer work of Cowell in 1906, and his own contributions since 1908 on lunar visibility; for he realized that ancient observers, unprovided with telescopes, had their own method and technique of detecting and recording such matters as the first appearance of the new moon, the phases of Venus, and the dimensions of an eclipse. He had also already carried far his study of the secular acceleration of the moon and the sun, for which ancient data were indispensable. Though he was not himself a professional observer, he was able to collect and evaluate the direct observations of others; for example, the visibility of stars during the total eclipse of 24 January 1925.

The other influence was that of the late Stephen Langdon, who came to Oxford as Shillito Reader in Assyriology in 1908, and became Professor in 1919. Fotheringham was as grateful for Mesopotamian records of astronomical occurrences, as Langdon for astronomical aid in interpreting them. His own need for such historical documents appears in correspondence with Cowell as early as 1906, and in a paper of 1908 on 'Historical data for the secular acceleration of the Moon' (*Monthly Notices*, R.A.S. lxix (1908), 26–30), and for a while it was this astronomical problem which interested him. But he was also impressed with the discoveries, as well as the technique, of Babylonian observers such as Naburimannu and Kidunnu, to whom he came to attribute all the more important discoveries currently credited to Greek astronomers, and scientific observations extending back over two thousand years before our era. In 1910 he wrote 'On the smallest visible phase of the

moon' (*M.N.* lxx (1910), 517–31), in 1915 'On the conjunction of stars with the moon, recorded by Ptolemy' (*M.N.* lxxv (1915), 716–17), and in 1919 'On Babylonian measures and the Δάκτυλος' (*Observatory*, xlii (1919), 46–51; *Isis*, iv. 175); in 1920 three papers on ancient eclipses, preparatory to his Halley Lecture (1921), and in 1925 on 'Naked-eye observations of Venus' (*M.N.* lxxxv (1925), 894). But meanwhile, instigated by Langdon, he had turned his attention to the use of these early observations to fix historical dates, and so supply a scientific framework for ancient chronology.

The progress of this inquiry illustrates that interplay of literary, archaeological, and astronomical researches which gave Fotheringham his opportunity. In 1870 Sir Henry Rawlinson and George Smith published a cuneiform document (Brit. Mus. *K.* 160) in Assyrian language, from Assurbanipal's library at Kuyunjik, describing it as a 'Table of the Movements of the Planet Venus and their influences'. In 1872 George Smith discovered that Babylonian dates were expressed in 'year-formulae' referring to some memorable event (*Trans. Soc. Bibl. Arch.* i. 45 ff.); but he did not recognize such a phrase in the 'Venus-tablet' *K.* 160. Sayce translated the tablet more correctly in 1874 (*T.S.B.A.* iii. 316–39) as a 'long table of the phases of Venus'; and in 1880 he recognized, with Bosanquet, that part of this text was an ignorant fabrication, of different style and grammar. As to the genuine, and presumably older, observations, it was known that the apparent movements of Venus follow a cycle of just under eight years, but 'as there is nothing to associate these observations with historical dates, there is no possibility of a real contribution to ancient history in this case'. Similar 'Venus-tablets' were published by Craig (1889) and Bezold (1891), and Schiaparelli (1906) recognized some of these as duplicates of *K.* 160; but from an allusion (among other disasters) to *Umma-manda* invaders, he assigned not only the interpolated section but the whole of *K.* 160 to the seventh century. Only when *Umma-manda*

folk were found in Hittite texts of the seventeenth century was the way again open for an earlier dating; and in 1912 Kugler recognized in the eighth line of *K.* 160, which had been misunderstood by every one, the 'year-formula' for the eighth year of Ammizaduga, fifth successor of Hammurabi on the throne of Babylon (*Sternkunde u. Sterndienst in Babel*, 257–311). Kugler also found that the observations in *K.* 160 were in accord with the movements of Venus for certain years between 2080 and 1740 B.C.; and he limited the alternatives further by the lunar-month dates for harvest in Babylonian contracts between landlord and tenant, checked by modern information as to harvest-times in Babylonia. He concluded in favour of 1977 B.C. for the first year of Ammizaduga, but noted that fifty-six years earlier or later the movements of Venus would have been the same. Kugler's result was disputed by Weidner (1917), Hommel (1920), and Ungnad (1921), and Kugler was converted (1921) to a later date, 1796 B.C.

In 1923 Langdon asked Fotheringham, at short notice, to help him in publishing the 'Venus tablet' *W.* 444 (*Oxford Edition of Cuneiform Texts*, ii). It became evident at once (1) that Kugler had overlooked Fotheringham's revision of the motions of Sun, Moon, and Venus; (2) that the date fifty-six years later than Kugler's 1977 B.C. stood comparison with these observations; and (3) that on Kugler's date for 'last visibility', Venus was in fact invisible.

Fotheringham had already in his employ a Berlin astronomer, the late Carl Schoch, and turned over to him 'the reduction of ancient planetary observations to see whether they afforded evidence of an apparent acceleration' such as he himself had reckoned. Though it took time to convince Schoch on certain points—for he knew no Assyrian, and had his own views about the First Dynasty of Babylon —Fotheringham's calculations, and definitive date 1921 B.C., were eventually accepted both by him and by the leading continental experts, Professor Schnabel of Jena and Professor Schaumberger of Rothenfeld. Fresh texts were

communicated by Schnabel and by Thureau-Dangin from Paris; fresh collations and translations by Langdon; and in 1924 Langdon found at Kish a new fragment which completed one of the Kuyunjik texts (*K.* 2321: *Illustrated London News*, 10 Oct. 1925, p. 666). The whole inquiry was published in 1928 as *The Venus Tablets of Ammi-zaduga, a solution of Babylonian chronology by means of the Venus observations of the First Dynasty* in the joint names of Langdon and Fotheringham, with Schoch's tables in full. The text was printed at Oxford, and the tables at the Isle of Wight County Press. For the first time, the whole series of Babylonian dynasties rested on a scientific determination, an astronomical event, and as the reign of Hammurabi ('Amraphel king of Shinar' in Genesis xiv. 1) now fell between 2067 and 2024 B.C. approximate synchronism was established with Amraphel's contemporary Abraham, from whom Eusebius' *Canones* begin.

Mention has already been made of Fotheringham's determination of the secular acceleration of the Sun and of the Moon, his principal astronomical discovery. It has been described by a German colleague as 'an advance on Newton, and the most important fact bearing on modern cosmical theory' (Langdon, *Empire Survey Review*, iv. 25 (July 1937), 189–91). It affected equally all ancient records of astronomical events, such as the movements of Venus, and modified slightly both the date and the region where a 'total' eclipse could be experienced. Occasionally this had historical (even strategical) implications; e.g. the famous 'eclipse of Thales' in 585 was 'total', not on the northern, but on the southern route through Asia Minor; namely on what Herodotus (i. 72) describes as the 'neck of this whole country', between the Halys river and the 'sea opposite Cyprus'. From 1926 onward Fotheringham continued to explore this and other unobserved variations (which he called 'trepidation') in the movements of Sun, Moon, and planets; and also of their apparent mass. Now if the planets are solid, or quasi-solid bodies, moving *in vacuo*, their mass

is invariable. Either, therefore, there must be an unsuspected force at work in the solar system, or else we must revise our conception of the solar system itself. Failing health, and his natural reluctance to announce a discovery in advance of demonstration, prevented Fotheringham from publishing his conclusions in full, though with customary promptitude and brevity he recorded his calculations (*M.N.* lxxxvi (1936), 296–300; lxxxvii (1927), 582–602; *Astr. Nachr.* 256 (1935), 1–18). And in his last official report as Reader he wrote: 'I regard this discussion as an important contribution to the astronomy of the solar system, but I do not anticipate that a conclusion so contrary to the received astronomical tradition will receive much attention.' And so indeed it fell out: Fotheringham will be better known a hundred years hence than he is now. His brother, the Rev. D. R. Fotheringham, sent to *Astr. Nachr.* 261 (1937) a summary of opinions expressed in conversation on this and kindred topics.

In 1924 Fotheringham was a candidate for the post of Radcliffe Observer at Oxford, and was strongly recommended by Professor Turner and others, on the ground that for the first time, since Bradley's death in 1763, Oxford had produced an astronomer of the first rank—one who had made a vital contribution to the subject; that his work was specially suitable to Oxford, and Oxford with its great libraries almost vital to the work. Such an appointment would have had great influence in bringing the Radcliffe Observatory and its valuable library into closer touch with the University. But the Radcliffe Trustees decided otherwise, and elected a distinguished Cambridge astronomer then working in Egypt. Though he did not approve of the eventual removal of the Radcliffe Observatory from Oxford, Fotheringham never let this interfere in any way with his kindly attitude, and this was fully appreciated.

Then at last, in 1925, came direct recognition of his studies, in a Readership of Ancient Astronomy and Chrono-

logy, created for him, and held by him till his death, together with an Honorary Assistantship at the University Observatory, which enabled him in some measure to acknowledge Professor Turner's encouragement and help in difficult days. As a distinguished historian said in proposing the decree to establish the Readership, 'in any other country Dr. Fotheringham would have been a professor. If a stranger had come here and found that Dr. Fotheringham was neither professor, reader, nor fellow, he might have been pardoned for saying that the ways of English Universities were past finding out. The present recognition was at once tardy and inadequate.' The salary was £300. Deserved, though unconscious, self-criticism.

How Fotheringham interpreted his duties as Reader we know from an article contributed to the *Oxford Magazine* (23 Oct. 1930). His post was 'like some other readerships and lecturerships, rather a recognition of the work which the holder of the post is doing of his own accord, than an attempt to meet an active demand for instruction. The subject is, therefore, defined rather by the tastes and studies of the Reader than by the needs of students. The Ancient Chronology in which I have specialized includes Astronomical, Technical, and Literary Chronology.' Fotheringham regularly announced lecture-courses in all three. Sometimes he had an audience. But he was ever accessible to students, and he was punctilious in dealing with the voluminous correspondence, and divers inquiries, which came from all sides. Christian scholars consulted him about the Star of Bethlehem and the date of the Crucifixion; classicists about the bimillenary of Virgil, and the Berlin 'Olympic Games'; Parsis, Hindus, and Mohammedans about the intricacies of their respective calendars. A list, among his papers, records more than 350 questions between May 1918 and December 1935, and the last was within a fortnight of his death.

By his Readership he became a member of the Sub-Faculty of Ancient History, attended its meetings regularly,

and regretted his latter inability to do so. But he seldom took part in discussion. He seemed to hold a 'watching brief' for learning and research, and when these were involved, his advice and support were assured.

In 1932 Professor Turner died, and Fotheringham was a candidate for the Savilian Chair of Astronomy. His application was supported by truly impressive recommendations, covering the whole range of his studies, with a characteristic review by himself of the position of Astronomy in the University, with proposals for future work.

In the next year he was elected a Fellow of the British Academy, 'an event', wrote another Magdalen Fellow, 'which gained new distinction for the College, and I think a new happiness for him, for he was always a devotedly loyal member of Magdalen'.

For many years the Fotheringhams lived in Oxford at 6 Blackhall Road, almost opposite to the Turners. But in 1933 they moved to higher ground on Cumnor Hill, naming their new home 'Dumbarrow' after the Forfarshire birthplace of Fotheringham's father.

Here, after a short illness, he died on 12 December 1936, and lies in the Presbyterian cemetery at Aston Tirrold in Berkshire, his favourite place of worship.

Such a career did not leave much time for public or social activity: indeed, as Fotheringham himself put it, his frail health had contributed something to his studies; and in later years, 'no patient could have been more conscientiously obedient than he'. His 'great but firm obliviousness to the conventional dividing lines between Faculties and Departments of study', and his modest way of life, enabled him to 'retain complete freedom to pursue his researches wherever they might lead'. As he wrote rather grimly, in 1930 when the worst was over, 'any recognition that will have a pecuniary value depends on incalculable forces. But that is not a peculiarity of the particular study.' Though 'a keen controversialist' and ruthless critic of slovenly work (e.g. a review in *Nature*, 10 June 1933) his kindliness and

equable temperament made him 'a very lovable man'. He had 'a pleasant wit which attracted as much as his learning' and adorned his scrupulous fairness. There is a story that when asked to pay a toll on his way to Aston Tirrold he quoted the Georgian Act of Parliament exempting persons attending their customary place of worship. And these qualities endured. A Merton contemporary found him in 1935 'as informative and as original as ever'. 'There was so much mind in him, and so much heart', wrote a former Fellow of Merton. 'He had scientific and scholarly interest in so many fields, and such interest too in human beings. He remembered men and women, and met them ever with clear memory and fresh interest.' With ancient astronomers he was the same: it was always the observer who mattered; how he did his job—what he *could* see—as well as what he *saw*. He was indeed 'a standing miracle in a world where men are apt to be lopsided. He was all-round, vivid, searching, and forceful both ways.' 'What enhanced the value of his knowledge was his remarkable gift for lucid exposition', and his Latin was as clear and incisive as his English. He had 'that hallmark of a first-rate mind—he never talked down to any one, and was incapable of contempt for imperfect knowledge in others'. 'His generosity in sharing his knowledge was an example and a lesson to us all.' To clarify, and to complete, was all he cared for: how he could deal with a colleague's mistakes may be seen in an early paper on 'The List of Thalassocracies in Eusebius' (*Journ. Hell. Stud.* xxvii (1907), 75–89).

'The undevout astronomer is mad.' Fotheringham was eminently sane. 'There was a spiritual stimulus in his deep piety and his strong upright character.' He inherited from his father, besides, a keen interest in Presbyterian church policy, and took his share of church work. Those who were associated with him 'admired his sympathy and courage in taking up the cause both of ministers and of congregations, whom he believed not to have sufficient consideration for their difficulties'. Whether they realized, or not, his

intellectual distinction, there must be many who 'will bear a still more indelible memory of him as a Christian gentleman, who did justice and mercy, and walked humbly with his God'.

JOHN L. MYRES

NOTE. This memoir owes very much to biographical material accumulated by Mrs. Fotheringham, to published obituaries, and to many personal letters. There are bibliographies in *Isis*, xxvii (Nov. 1937), and in *Archaeon*, 1937, and in *Isis*, xxvii, is a photographic portrait of recent date.