

**John George Bartholomew, LL.D. (Edin.), F.R.G.S.,** Geographer and Cartographer to the King. By **Geo. G. Chisholm, M.A., B.Sc.,** Reader in Geography, Edinburgh University, Secretary to the Royal Scottish Geographical Society. *Communicated by* THE GENERAL SECRETARY.

(MS. received October 19, 1921. Read November 7, 1921.)

It was in the latter part of 1883 or early in 1884 that I became acquainted with the subject of this notice. At that time I was settled in London, and on the occasion of a short visit to Edinburgh I called on the late Professor Geikie, who said to me, "There's a man I want you to know, who has got his head screwed on the right way on the subject of maps." He named Mr Bartholomew, and recommended me to call on him, which I at once did. I found him at his office in Chambers Street, engaged on the actual work of map-drawing, and he straightway proceeded to give me his ideas on this subject and to indicate the methods which he wished to see displaced. Twenty-five years or so passed, during which, owing to the distance between our abodes, our meetings were infrequent; still there was, I believe, scarcely a visit of either of us to either end without our meeting somewhere—mostly at the London end, where the increasing business and reputation of the firm with which Mr Bartholomew was connected frequently brought him. Naturally, our meetings were more frequent when Edinburgh once more became my home in 1908, and still more so after my appointment to the secretaryship of the Royal Scottish Geographical Society.

Meantime the remark which Professor Geikie had made in first speaking of him to me had been amply verified. At that time Mr Bartholomew was a young man, under twenty-four years of age. He was born at Edinburgh on the 22nd of March 1860. Yet he had already for several years taken an active share in the work of the cartographical establishment then belonging to his father. From 1888, when accordingly he was only twenty-eight, he had the entire management of the business. In 1889 he married; and in that year, too, the business was transferred from Chambers Street to Park Road and became known as the Edinburgh Geographical Institute—a name retained at the new premises in Duncan Street, to which the business was removed in 1911.

Dr Bartholomew's management of the business was signalled from an

early date by the inception of a number of enterprises of great boldness, and those which were carried out raised the reputation of the firm to a high pitch. First came *The Survey Atlas of Scotland*, in 1895; but this, it should be mentioned, was mainly the uniting in one whole of sectional sheets on the scale of half an inch to the mile, which had been appearing for several years and formed the first topographical maps in which the method of representing the inequalities of the surface by layering, or the distinguishing of areas between successive contour lines by different colours and tints, was applied on a large scale. It had previously been made use of at Mr J. G. Bartholomew's suggestion, at least as early as 1880 in maps prepared for Baddeley's *Guide to the English Lake District*. The method has since been adopted on topographical maps prepared by many other geographical establishments, including the Ordnance Survey Department at Southampton, but by none with greater taste and effectiveness than by the firm which first so used it. *The Survey Atlas of England and Wales* followed in 1903. Both atlases have, besides the large-scale sheets, more comprehensive maps on a smaller scale, showing the geology and climatic and other features of the geography of the countries represented. In both, the maps by Bosse showing the density of population are particularly noteworthy. For Scotland this map was brought up to date in maps prepared by Mr Bartholomew for publication in *The Scottish Geographical Magazine*, in accordance with the censuses of 1901 and 1911, the latter included also in the 1912 edition of the *Atlas of Scotland*. The three together form an interesting conspectus of census results, although of course they cannot but exhibit the inevitable defects of all density of population maps arising from the necessary arbitrariness in the choice of the limits of density distinguished by different colours or shades, and the mode in which town populations are allowed to influence the density tint of the areas to which they belong.

Before the issue of the second of the two atlases mentioned there appeared, in 1899, the first volume to be issued of the grandest enterprise of the Institute—a physical atlas designed on a scale of hitherto unparalleled magnitude. The prospectus of the whole work was given to the public along with the *Atlas of Meteorology*, which was the first published of the seven volumes of which the whole work was designed to consist, and of which this volume was to form the third.

The whole work was then planned in all its essential details. The first volume, besides containing a general introduction dealing with the Extent of Land and Sea Surveys, was to be devoted to Geology; the second to Orography, Hydrography, and Oceanography. The third, as already

stated, is an atlas of Meteorology. The fourth was to be devoted to Botany, the fifth to Zoology, the sixth to Ethnography and Demography, and the seventh to General Cosmography and Terrestrial Magnetism. It was to include in all 212 plates, the titles of which are given in the prospectus. The prospectus states that the other sections will follow that on Meteorology in rapid succession, and, if the fact that this anticipation proved too sanguine will surprise no one who has had anything to do with the preparation of comprehensive works even on a much smaller scale than this, it may be taken as a typical illustration of the patient tenacity that characterised Dr Bartholomew in all his work that a second volume of the series, the *Atlas of Zoogeography*, was at last published in 1911, as well as that many other plates belonging to other sections not yet published were prepared under Dr Bartholomew's direction.

It will serve to give some idea of the magnitude of the whole undertaking to compare the two sections of the atlas which have been published with the corresponding sections of the atlas of Physical Geography that had the first place at the time when that of the Edinburgh Geographical Institute began to be published, Berghaus *Physikalischer Atlas*. To begin with, the size of the plates in the Edinburgh atlas is considerably larger than those of Berghaus—measured from the outer limit of the border (exclusive of margin)  $19\frac{1}{2}'' \times 15\frac{3}{4}''$ , as against  $16'' \times 13''$ . The section on Meteorology in the Edinburgh atlas has 34 plates (35, including the frontispiece plate showing the distribution of meteorological stations in the world at the time of publication) as against 12 in Berghaus, and an introductory text of 40 pages, besides an appendix of 12 pages (4 giving a list of meteorological stations, 4 a bibliography, 2 a glossary, and 2 tables), as against 10 in Berghaus; that on Zoogeography has 36 plates as against 9 in Berghaus, together with an introductory text of 56 pages, exclusive of a bibliography of 11 pages, as against a text of 8 pages in Berghaus.

All those primarily responsible for the *Atlas of Meteorology* are now dead. It was prepared by Dr Bartholomew himself in association with the late Professor Herbertson, under the editorship of the late Alexander Buchan, LL.D., F.R.S. Among its new features may be mentioned several maps illustrating isanomalies of temperature, maps showing isonephs, or lines marking the limits of equal degrees of cloudiness, and isohels, or similar lines marking the limits of equal extent of sunshine, and maps showing the paths of barometric minima.

It may be mentioned as another characteristic fact that when the *Atlas of Zoogeography* did appear it contained even more than was promised in the prospectus—36 instead of 35 plates. In this case the long

interval that elapsed between the drawing up of the prospectus and the appearance of the volume resulted in a great change in the selection and arrangement of the plates. The scheme as originally prepared was that of the late Philip Lutley Sclater, but the zoologists under whose care the volume was actually prepared were W. Eagle Clarke, F.R.S.E., F.L.S., Keeper, and Percy H. Grimshaw, F.R.S.E., F.E.S., Assistant Keeper of the Natural History Department, the Royal Scottish Museum; and the classification adopted naturally answered to the state of zoological science at a later date than that of the prospectus.

Though the other volumes of the atlas have not yet appeared, it may be taken for granted that some of the work done with a view to their publication has been utilised in other works. Thus the volume on Ethnography and Demography was designed to include plates illustrating the Production of Edible and Drinkable Commodities, International Commerce at the End of the Nineteenth Century, and others on the same subjects as some of those in the folio *Atlas of the World's Commerce* (176 plates), published by Newnes early in the present century. Dr Bartholomew was also responsible for the preparation of the atlas accompanying the *Imperial Gazetteer of India* (1908). At the time of his death he had supervised the preparation of nearly all the plates for the important political atlas recently completed and published under the title of *The "Times" Survey Atlas of the World*.

Inevitably Dr Bartholomew's zeal for geography was manifested in many ways apart from the work carried out in the Geographical Institute. Most conspicuously was this the case in connection with the Royal Scottish Geographical Society. He was one of the most active and enthusiastic of those who encountered and vanquished all the difficulties that had to be overcome in getting it founded in 1884. From the beginning till the time of his death he acted as one of its honorary secretaries. He was the contributor both of maps and articles to its magazine—the articles on "The Mapping of the World," in vols. vi and vii. He took a special interest in the preparation of the Edinburgh number issued in 1919, and for it he presented to the Society the interesting "Chronological Map of Edinburgh showing Expansion of the City from the Earliest Times to the Present" (a "present," however, previous to the last extension of the city boundaries).

He bequeathed to the Society the sum of £500.

He took great interest in the establishment of the lectureship in Geography in Edinburgh University, and was a generous benefactor to the department when the lectureship was founded and equipment required.

From 1909 to 1912 he was a member of Council of this Society.

Only those who knew Dr Bartholomew personally could be aware of the extraordinary difficulties under which the above-enumerated series of persevering labours were carried on, and the extraordinary resolution revealed in carrying them through, and only those who knew him in his earlier years could realise the whole nature of the man. For a great part of his life, and, above all, in his later years, he had to contend against constant weak and too frequently ill health. Sometimes he was absolutely laid aside, but, except on those occasions, he went on steadily and calmly with his work to the limit of his strength, and never lost his interest in those things which he had at heart. Again and again, before Council meetings of the Geographical Society, I had interviews with him in bed, and the advice that he had to give on those occasions was always eagerly looked for by the other members of Council.

This constant fight with ill-health naturally gave to him in his later years a somewhat melancholy expression; but it was always a calm, grave, and dignified melancholy untouched by any hint of complaint. It was, however, an expression that made it difficult to realise the buoyant and exuberant energy which characterised him when young, and brought out other sides of his character. I remember particularly one occasion in the early days of our acquaintance when seated on a brake in the island of Jersey I was hailed by him from another brake which was going on the same tour. The two brakes stopped at the same place for lunch, and Mr Bartholomew, as he then was, entered with sympathetic zest into the enjoyments of the youngest and most frivolous. Then it was quite easy to picture to oneself the energy which he had shortly before shown at the foundation of the Geographical Society.

His later years were further saddened for him, as for others, by the War, but in connection with it also his character was revealed. He took the War as a call to national and personal duty, but—though he lost a son in the War and had another maimed—without any admixture of national or personal hatred, but always regarding it as a great human tragedy. It may be mentioned here that he was for many years an elder in the United Free Church of St George's, Edinburgh.

In the later years of his life he frequently had to leave his home in search of improved health. It was on one of those occasions that he met his end. Early in 1920 he went to Esterel in Portugal, accompanied by his wife and daughters. Having been taken up to Cintra in the hope that the hill air would benefit him, he died there on the 13th of April in the same year, and there he is buried. He left a widow, two sons, and two

daughters, the elder of the two sons now the managing director of the firm styled Messrs John Bartholomew & Son, Limited.

Both at home and abroad the value of Dr Bartholomew's services to science were recognised in various ways. He was an honorary member of many foreign geographical societies, including those of Paris, Portugal, Budapest, and Chicago. In 1905 the Royal Geographical Society awarded to him the Victoria Medal "for his successful effort to raise the standard of cartography." In 1918 the Geographical Society of Chicago conferred on him the Helen Culver Gold Medal. In 1909 Edinburgh University, his *Alma Mater*, bestowed on him the honorary degree of LL.D.

In spite of the drawback of ill-health the private life of Dr Bartholomew was singularly, though quietly, happy, a natural result of the qualities in him which inspired confidence and affection among all those who came into intimate contact with him. This notice may be concluded by testimony on this head borne by a Russian admirer, General Jules de Schokalsky, President of the Russian Geographical Society, in a communication to this Society, dated Petrograd, October 1920, just after he had heard the news of Dr Bartholomew's death. After speaking in the highest terms of the value of Dr Bartholomew's cartographical work, taking as an illustration the remarkable precision even of his "ordinary" work in the map on Lambert's equivalent area projection accompanying the paper by Dr (afterwards Sir John) Murray "On the Height of the Land and the Depth of the Ocean" in *The Scottish Geographical Magazine*, January 1888—a precision such as to enable General A. Tillo to obtain valuable results working from a much reduced copy of it,—the writer goes on to say:—

"My personal acquaintance with J. G. Bartholomew began by correspondence. Being interested in geographical and cartographical matters, I was introduced to him by Sir J. Murray, and we remained a long time only in correspondence. At the opportunity of the Geographical Congress at Geneva in 1908 I paid a visit to Edinburgh, and was for a fortnight the guest of Mr and Mrs J. G. Bartholomew; and later we met at Geneva, staying in the same hotel and working side by side on the Congress business, and became true friends. In 1912 I came on a second visit to Edinburgh, and stayed about ten days at the J. G. Bartholomew's home.

"These opportunities of meeting and talking with J. G. Bartholomew and observing his system of working, his relation to his aids in the Institute and surrounding scientists and other people, revealed his true character as a man. . . . He was the personified truth itself, and at the

same time with such unselfishness and goodness as charmed anyone who approached him.

“Geographical science lost in him one of its best workers, his nearest and his friends true support in their hard moments of life.

“Coming myself not from a cold-blooded origin, I have no shame when in writing this my eyes are full of tears, and his country can remember that there rarely lived a greater *gentleman*.”