

Office ; on the retirement of Captain Toynbee in 1888, he succeeded him as Marine Superintendent. The principal works which he has carried out in that capacity have been the charts of sea surface temperature, of barometrical pressure, and of currents for all oceans. The discussion of the meteorology of the South Indian Ocean from the Cape of Good Hope to New Zealand, which is shortly about to appear, has been carried out under Lieutenant Baillie's superintendence, while he had laid down the lines of inquiry to be pursued in the work now in hand at the office—the *Meteorology of the South Atlantic and of the Coasts of South America*.

Lieutenant Baillie married in 1867 Helen, daughter of A. M. Conyers, of Bermuda. He died suddenly at Broadstairs, 1899 June 24, at the age of fifty-five years, leaving a widow and seven children.

He was elected a Fellow of this Society 1879 January 10.

THE REV. EDWARD LYON BERTHON was born in Finsbury Square, London, 1813 February 20. His father, Peter Berthon, was a descendant of St. Pol le Berthon, only son of the Huguenot Marquis de Chatelléraut, who survived the massacre that followed the revocation of the Edict of Nantes in A.D. 1685, and escaped to Bordeaux, thence to Lisbon, where he engaged in trade as a merchant, and had contracts for supplying the Army with provisions during all the campaigns in the Peninsula. His mother was a daughter of the great surgeon, Henry Park, of Liverpool.

When only five years of age he was adopted by his grandmother, who resided at Leyton, in Essex ; and he was sent to private schools at Walthamstow and Woodford until he was nearly fourteen years of age. About this time his grandfather, Henry Park, was retiring after a very successful practice of sixty years, making over the same to a Mr. James Dawson, on the understanding that it was eventually to come into the possession of his grandson. Accordingly Edward Lyon went in 1828 to Liverpool, where, during a period of five years, he spent the greater part of every day at the principal hospital, under James Dawson, who was then chief surgeon of that institution. He early showed a strong predilection for mechanical science. He had stood by George Stephenson when he started the "Rocket" on the first mile of railway at Rainhill, and now would seize every opportunity of getting to the Phœnix Foundry, in which two of his brothers-in-law were partners, and where, encouraged in his attempts, he was told that "he was much too good for a doctor, and that he ought to be an engineer." However, after five years' study at Liverpool, he went to Dublin, and completed his medical course at the College of Surgeons in that city.

In 1834 he married Margaret, youngest daughter of William Preston, Esq., of Birchfield and Fairview, Toxteth Park, Liverpool, by whom he had two sons and five daughters. One son and four daughters survive him. Mrs. Berthon died in 1865.

After his marriage Mr. Berthon spent considerable time both in home and continental travel, and in 1841 he determined to take Holy Orders. He had, three years previously, entered his name at Emmanuel College, Cambridge, but migrated to Magdalene, where he entered as a Fellow Commoner. He took his degree in 1845, and, having been ordained deacon, was licensed to the curacy of Lymington, in Hampshire. In 1846 he was ordained priest, and in the following year was presented to the living of Holy Trinity, Fareham, in the same county.

It was during his residence at Fareham—a country town then largely the abode of retired naval officers—that he conceived the idea of his collapsible boat. This invention, which has made his name famous, was suggested by the wreck of the s.s. *Orion* off the coast of Portpatrick, 1849 June 29. He also at this time perfected his “speed indicator” or “perpetual log” for ships, which was fitted to the then new royal yacht *Victoria and Albert*; also to the *Osborne*. In or about 1858 he resigned his living, as he said, “to get away from ships and boats.” In 1860 he became Vicar of Romsey, Hants, which he held for thirty-two years, retiring in 1892.

About twenty-seven years ago (1873), at the earnest solicitation of the late Samuel Plimsoll, M.P., the collapsible boat was revived. Another start was made. Fortune favoured the enterprise; large orders came in from our own and the German Governments; and under the style and title of the “Berthon Boat Co., Ltd.,” with Mr. Berthon as constructing director, and his son, E. P. Berthon, as manager, it soon became a thriving industry, employing nearly one hundred workmen. Mr. Berthon gave a lecture in this connection at the Royal United Service Institution so recently as 1895, his subject being “Collapsible Boats and pontoons for Military Purposes.” Mr. Berthon was among those who in early days foresaw the future of the screw propeller for ships (1835), but, through many discouragements, he abandoned a patent which he had taken out. He was told that the screw was “a pretty toy which never would and never could propel a ship.” He had only to wait until the close of the Crimean war to see, as he would say, “every line of battleship, every frigate, sloop of war, floating battery, and gunboat *with the screw*.” He also invented the “Nautachometer,” or speed indicator; the clinometer, or trim indicator; roll and draft indicator; drogue, or sea-anchor; collapsible pontoons, portable hospitals, tents, &c. Mr. Berthon was, in short, a man of wonderful versatility. As a preacher he was eloquent, as a lecturer bright and entertaining. Moreover, he had a great charm of speech, and was master of three or four languages. Theology, architecture, philosophy, mechanics, sculpture, and art, in all he excelled, and many are the traces of his handiwork, in cunningly carved and leafy boss, in gilt pateræ, and sacred symbol, to be found in the grand old Norman Abbey Church at Romsey, where, notwithstanding his retirement, he did frequent duty, and was to the

last the authority to whom all referred in matters connected with the restoration of that noble fabric.

He designed the well-known "Romsey Observatory"; two or three equatorial stands for reflecting and refracting telescopes, one of which—a $12\frac{1}{2}$ -inch reflector—received a silver medal at the Paris Exhibition, 1878. His "dynamometer" for ascertaining the power of eyepieces is well known, though not so much so his latest proposal—of only last year—for standardising eyepieces. Many telescopes were constructed by him of different apertures—the specula, the writer believes, excepted—including a reflector of 18 inches, and weighing nearly two tons, for the late Rev. H. Cooper-Key; a 10.5-inch equatorial for the late Professor Pritchard of Oxford, and a stand for that "keen observer of the starry host" and author of *Celestial Objects*, the Rev. Thomas Webb, of Hardwick Vicarage, Hereford. And of work in other directions, "it is a pleasure," said he, "to reflect that I have enabled many a brother priest of limited means to rejoice in the possession of an equatorial telescope of from nine to eighteen inches aperture, and thus to pursue the most noble of the physical sciences, and to sing intelligently with the Psalmist, 'Cœli enarrant gloriam Dei.'"

In the autumn of 1898 Mr. Berthon finished an equatorial of sixteen and a half inches aperture (speculum by Sir Howard Grubb) and nearly ten feet focal length, together with an observatory, constructed at the Boat Works, Romsey, for a gentleman at Johannesburg.

Mr. Berthon was elected a Fellow of this Society 1865 January 8, and retired in 1880. He had one paper in the *Monthly Notices*—"On the Equestrian Equatorial" (*M.N.* vol. xxxv. p. 106). It was read at the meeting 1874 December 11, when he exhibited the instrument. He was re-elected 1899 May 12, and many will remember the ovation he received when, on his re-admission 1899 June 9, he exhibited two telescopes of his construction, together with a simple device for dividing telescope circles.

Mr. Berthon died at his residence, St. Margaret's, Cupernham, Romsey, 1899 October 28.

[For the above particulars the Council is indebted to Mr. J. J. Hall, of Slough.]

JAMES CARPENTER was born at Greenwich in the year 1840. He entered the Magnetical and Meteorological Department of the Royal Observatory, Greenwich, as computer, in the year 1854, being after a time transferred in a similar capacity to the Astronomical Department, in which, on the retirement of Mr. H. Breen, in 1859, he was appointed assistant. At this time the new South East Equatorial was approaching completion, and in 1861 it was placed under his special charge. He was a good draughtsman, and, in addition to his ordinary astronomical duties, made from time to time drawings of the planets *Mars*, *Jupiter*,