

have been ended so early. CHARLES BRONGNIART was elected a Foreign Correspondent of the Geological Society of London in 1888, and died April 18, 1899, aged 40.

---

TOWNSHEND MONCKTON HALL, F.G.S.

BORN MARCH 22, 1845.

DIED JULY 1, 1899.

TOWNSHEND HALL was born at Torquay in 1845, and studied for a short time at Wadham College, Oxford. On leaving there he gave himself up to science, and especially to geology. A paper by him on the distribution of fossils in the North Devon Series was printed in the Quarterly Journal of the Geological Society (1867, vol. xxiii, pp. 371-381); but his chief contributions to the geology and mineralogy of his native county are in the Trans. Devon Association (of which he was a member from the first), and include papers on mineral localities, raised beaches, submerged forests, concentric lamination, mineral oil, classification of North Devon rocks, and various matters of local geology. He also contributed to the GEOLOGICAL MAGAZINE and to the Mineralogical Magazine, and wrote several sketches of the Geology of Devonshire or parts thereof, and the "Mineralogists' Directory." He became, indeed, well known as our chief local authority on North Devon.

---

PROFESSOR ROBERT W. BUNSEN, PH.D.

BORN MARCH 13, 1811.

DIED AUGUST 16, 1899.

ALTHOUGH Bunsen achieved his great reputation as a chemist, and held the Chair of Chemistry in the University of Heidelberg for many years, he wrote (especially in his earlier life) several papers on minerals and on mineral waters, as well as on various geological subjects, notably on the chemico-geology of Iceland. To the scientific world he is largely known for his work on spectrum analysis, resulting in the discovery of the elements caesium and rubidium; whilst to the world at large he is known by the invaluable gas-burner that bears his name and the principle of which he discovered. Professor R. W. Bunsen was elected a Foreign Member of the Geological Society of London in 1856, holding the honorary distinction for 43 years. He died at the age of 88 years.

---

JOHN BALDRY REDMAN, F.G.S., MEMB. INST. C.E.

BORN 1816.

DIED DECEMBER 21, 1899.

JOHN BALDRY REDMAN was elected an Associate of the Institution of Civil Engineers in February, 1839, and a Member in March, 1846, his name being the earliest on the roll of over 6,300 Members and Associates at the time of his death. He was elected an F.G.S. in 1882. He did much service to geology by his important papers, read to the institution above-named, "On the Alluvial Formations, and the Local Changes, of the South Coast of England," and "The East Coast between the Thames and the Wash Estuaries," published in 1854 and 1865, which were the first systematic account of the changes along a great length of our coast, in this case from Norfolk southward to Dorsetshire. Much other work of the kind was also