

The address of Mr. McNeile is as follows:—

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and further offers of assistance will, of course, be welcomed.

The opportunity may perhaps be taken to appeal again for more *observers* of these phenomena, who should, as hitherto, send their observations to Dr. L. J. Comrie, at the Nautical Almanac Office.

T. WHITWELL,

Director of Computing Section.

Obituaries.

Patrick Henry Hepburn.

Patrick Henry Hepburn, who lost his life on 1929 December 25, as the result of an accident in the Lake District, was born on 1873 February 4. He was the eldest son of the late James S. Hepburn, solicitor, of Cheapside. Earlier generations of his family had been tanners. He was himself a member and past master of the Curriers' Company, and at the time of his death had been clerk to the Company for some years. He was educated at Charterhouse and Amersham Hall School, near Reading. He qualified as a solicitor in 1894, being placed second in all England in the final examination, with a Clifford's Inn prize, entering his father's firm, of which he ultimately became the principal. In 1899 he took honours, the London LL.B.

His interest in astronomy began in early youth with the use of a 3-inch Wray telescope which was in the family. In 1896 he went to Norway to see the total eclipse, and in the following autumn was introduced by Mr. Arthur Cottam to the British Astronomical Association. In 1910 he joined the Hampstead Scientific Society, whose observatory, with its 8-inch reflector, now replaced by a 6-inch clock-driven Cooke refractor, had just been opened in time for Halley's Comet. He was soon appointed senior honorary secretary of the Astronomical Section. Having thus for the first time obtained access to an instrument of adequate size, he rapidly developed into an active amateur. In addition to organising the practical work at the observatory and the system of demonstrations to members of the Society and the public, he made regular observations on his own account, characteristically installing a camp bed at the observatory during the apparition of Mars in 1911. He also began reading papers, first at the Hampstead Society and then at meetings of the Association. He soon became a member of the Council, was appointed Director of the Saturn Section in 1912, and served as President in 1921-3. In 1911 he acquired the 12½-inch Calver formerly belonging to Mr. Cottam, and next year added a private observatory with a 12-inch clock-driven equatorial reflector. In later years he was frequently granted permission to use the 28-inch at Greenwich on Sunday nights. He was elected a Fellow of the Royal Astronomical Society in 1911, was a member of the Council from 1922 to 1928, and served as Honorary Treasurer during the year 1927-8.

His work on Saturn dealt chiefly with the luminosity and transparency of the rings, their passage through the line of sight in 1921, and the magnitudes and densities of the satellites. In 1914 he pointed out for the first time the visibility of the ball of the planet through Ring A on a photograph taken by Professor Barnard three years before. Besides the solar eclipse of 1896, he made private visits to those of 1900 and 1905 in Spain and 1912 in Normandy. In 1914 he was with the Greenwich party at Minsk in Russia when the war broke out, and helped to make up for the absence of other observers who were prevented from arriving. At the 1927 eclipse he went up in an aeroplane with G. Merton to try and photograph the approaching shadow.

Apart from his work on Saturn he contributed early papers to the Association on the partial illumination of the Moon's surface during a total eclipse observed at Hampstead, on observations of a complete circle of light round Venus at inferior conjunction, on an explanation of the Nautical Almanac diagram of a total solar eclipse, and on the mass and density of Sirius B. His presidential addresses to the Association dealt with the masses, densities and surface brilliancies of stars, and the history and recent developments of astronomy.

His exceptional energy of body and mind found outlets in many other hobbies besides astronomy. These included cycling, swimming, architecture, photography and, in recent years, Hebrew. He had cycled over most of England, much of Scotland, and large parts of Belgium and France, and had travelled in Spain and Sicily. In 1902 he set himself to make a complete series of photographs of the Norman churches in the neighbourhood of Caen in order to test a theory of the origin of Gothic vaulting. During the war, although over military age, he was not satisfied until he had obtained a commission as Major in the Royal Naval Air Service, which took him kite-ballooning in East Africa and the Mediterranean. In his spare time at Gibraltar he made friends with a local padre and began to acquire a knowledge of Hebrew, and he subsequently made his own translations of several parts of the Old Testament. He thought nothing of spending the whole night, either on his professional work or on one or other of these hobbies, and then, after a swim in the Hampstead Ponds, going to the City as usual in the morning. But even these activities could not satisfy his inexhaustible energy and his passion for adventure. He took to going on solitary expeditions in mountain country, often prolonged far into a winter's night, returning in safety so many times that he seemed to have acquired a sort of immunity. It was while thus exploring a pass which darkness had changed from the known into the unknown that he met with his accident.

Hepburn's exceptionally original and independent ways of thinking and living did not make him any the less agreeable as a friend and companion, or prevent him from working well with other people, and there have been numerous tributes to his lovable character and charm of manner. He leaves a widow, the poet who writes under the name of Anna Wickham, and three sons, to whom the Council at its meeting on January 1 sent an expression of their deep sympathy.

Duncan Campbell Andrew.

The West of Scotland Branch have to deplore the loss by death of Mr. Duncan Campbell Andrew, who died at Bearsden, near Glasgow, on 1929 November 19, in his eightieth year. Mr. Andrew was a native of Campbeltown, Argyllshire, and in his boyhood acquired a love for the sea and for sailing, which he ever afterwards retained. In 1874 he entered the shipping office of Sir Donald Currie in London. Six years afterwards he went to Durban as agent of the Castle Packets Company, and six years later to Cape Town. With the Castle, and subsequently the Union Castle Line, his period of service extended altogether to 34 years. By the staff and servants of the companies and by the community at large he was greatly respected and esteemed. During his residence in South Africa he enjoyed the friendship of the great Scottish astronomer, Sir David Gill. On his retirement he returned to spend his latter years in his native country.

In 1912 November he entered the British Astronomical Association through its West of Scotland Branch, and was thus a member during 17 years. Although his health was latterly not so vigorous as to allow him to be a constant attender at the meetings, he took great interest in the affairs of the Branch, serving for some time as a member of its Council. He contributed to its proceedings a paper, which was much appreciated, on the determination of position at sea. His former residence in southern latitudes was of use in enabling him to speak from personal knowledge of the aspects of the southern constellations.

It was only on his retirement from business, when over 60 years of age, that Mr. Andrew took up the serious study of astronomy, but he pursued it with great enthusiasm. He distinguished himself in navigation and nautical astronomy at the Royal Technical College, and in his private observatory he devoted himself to observation with the telescope and various nautical and mathematical instruments.

In addition to his scientific pursuits, Mr. Andrew took an active interest in, and gave much support to, philanthropic work. He was of a most genial, courteous and kindly disposition. Golf and yachting were his favourite recreations. He was particularly happy in his partner in life. Mr. and Mrs. Andrew had a large circle of friends during their residence in South Africa and in Scotland. Mrs. Andrew was ever an able and genial hostess, and her co-operation in the social sphere was invaluable and highly appreciated by all. It is worthy of special notice that Mrs. Andrew supplied some very interesting reminiscences of Sir David Gill which, as feelingly related in her own words, were incorporated by Professor Forbes in his biography of the great astronomer (*vide* "David Gill: Man and Astronomer," pp. 286-7).

In his old age Mr. Andrew always maintained his youthful and cheerful disposition. Several members of the Branch will remember with pleasure visits to him at Bearsden, when they enjoyed the privilege of inspecting or using his instruments. The Branch have recorded their regret at his loss, and their sincere sympathy with his widow and relatives.—J. J. R.