

Books Fund which is administered by the Royal Society, and will ever remain a monument to his untiring energy.

Taylor developed interests other than purely scientific ones, and after he had become blind served as a University member of the Cambridge Borough Council and was Mayor in 1900–1901. For some years afterwards he acted as chairman of the finance committee of the Council. His cheerfulness and patience in his terrible affliction will ever remain an inspiration to all who had the privilege of knowing him. He died at his house in Cambridge on 1927 October 16.

He was elected a Fellow of the Society on 1875 May 14.

WILLIAM JOHN THORROWGOOD was born at Portsmouth on 1862 February 8, and spent his life in the service of the Southern Railway; when he retired on 1927 September 30, he had been for seven years superintendent of the Company's signal and telegraph department. His career provides a remarkable example of promotion by merit, for he commenced "in the ranks" as a junior clerk, and rose step by step until he was appointed chief of his department. He was responsible for many important developments in the work of his department, including the installation of the automatic telephone system and of automatic electric clocks at Waterloo and other places, which are synchronised daily at 10 a.m. by the time-signal from Greenwich. Mr. Thorrowgood always took a keen interest in the educational aspect of his work, and besides lecturing at many centres, instituted a signalling school at Wimbledon. He was a member of the Institution of Electrical Engineers, and of the British Astronomical Association, and was a regular attendant at the Society's meetings.

On his retirement from service with the Southern Railway he moved to 23 Denmark Avenue, Wimbledon, where he installed the 8-inch Cooke refractor once used by Dr. Maw, and was looking forward to spending his leisure in the pursuit of astronomy. But he had never really recovered from the death of his wife in 1925, and he died on 1928 October 18, aged sixty-six. He has bequeathed to the Society his 8-inch refractor, together with its house, and £100 towards the expense of moving it.

He was elected a Fellow of the Society on 1922 January 13.

ANTONIO ABETTI, who at the time of his death on 1928 February 20 was the doyen of Italian astronomers, was born of Paduan parentage on 1846 June 19 at San Pietro di Gorizia, then a part of "Italia Irredenta." After taking his degree at the University of Padua in 1867 he at once entered on his astronomical career as assistant to Giovanni Santini, the director of the observatory of that city, and applied himself with so much zeal to the study of meteorology and spectroscopy that on the occasion of the transit of Venus in 1874 he was chosen to take part in the Italian expedition proceeding to Muddapur, in Bengal, to observe the phenomenon. The leader of this expedition was the noted solar physicist, Pietro Tacchini, who in the report on the work done by his party, published at Palermo in 1875, pays a warm tribute to Abetti's

skill in managing to secure an observation of Venus, as seen through the open slit of his spectroscope, projected against the solar chromosphere on the C-line.

This observation, which is figured in Plate 9 of the report in question, was considered remarkable enough at the time, but it was, after all, but an earnest of that extraordinary ability for overcoming technical difficulties which characterised Abetti's whole career as a practical astronomer. His technological talents were still further developed some time later by a year's sojourn for instructional purposes at the observatory of Berlin under Tietjen, so that, when at the comparatively early age of forty-seven he was promoted from his assistantship to Santini's successor, Lorenzoni, at Padua, to become director of the newly constructed Arcetri Observatory at Florence, he found full scope for his marked technical knowledge in the complete reorganisation of that somewhat neglected establishment.

This observatory had gradually developed from a modest institution situated within the city walls and dedicated, about the year 1807, to the service of astronomy. It had been successively presided over by De Vecchi, Pons, and Amici, and although the last named had constantly recommended the transference of the astronomical instruments to a more convenient site on one of the hills surrounding Florence, it was reserved to his successor Donati, the discoverer of the great comet of 1858, to realise the idea of building a suitable observatory to receive them on the classic hill of Arcetri, lying to the south of Florence and sacred to the memory of Galileo.

The building was accordingly opened in 1872 by Donati and, after his death in the following year, came for a brief period under the directorship of Tempel. Owing, however, in large measure to the transfer of Italy's capital to Rome, the establishment had been suffered to pass through a period of neglect, and Abetti, taking over command in 1893, thus found himself free to exercise that genius for instrumental equipment and organisation which, thanks to his energies and those of his son and successor, Dr. Giorgio Abetti, has converted the Arcetri Observatory into one of the most up-to-date astrophysical stations in Europe.

Abetti's first care was to remount the famous Amici objective, constructed about the year 1840, in such a manner that the equatorial mounting itself would be capable of bearing a much heavier optical equipment when an opportunity of increasing the observatory's instrumental means should present itself. This has now occurred, and, under the Reparations Act, a Zeiss objective of 15 inches aperture has taken the place of the old lens, while the whole observatory has been modernised to the extent of including a tower telescope. Details of the latest instrumental equipment of the Arcetri Observatory must be sought elsewhere,* but the fact remains that, thanks to his technical resourcefulness, and more particularly to his skill in adapting the Amici objective of 28.4 cm. aperture to such work as lay well within its powers, as, *e.g.*, the observation of the minor planets and astronomy of position generally,

* See *Jour. Brit. Astron. Assoc.*, **35**, 261, for Professor G. Abetti's description of the new instruments.

Abetti was able to maintain for over twenty-five years an output of observational literature which was as valuable for its accuracy as it was remarkable for its abundance.

The complete list of his publications comprises over eighty separate items, while his astronomical activities, in spite of his retirement under the age limit in 1921, lasted to within a few days of his death.

Ever busy with the technical side of his profession, Abetti conceived the happy idea of founding at Arcetri, and close to the observatory, the new laboratories for Physics and Practical Optics, which several Fellows of the Society had an opportunity of inspecting in 1922 on the occasion of the meeting in Italy of the International Astronomical Union.

But for an innate modesty which governed Abetti's way of life generally, from his scientific pronouncements down to the ordering of his home and his characteristic simplicity of dress, a far wider renown might easily have been his. The interests of his profession, however, were all-sufficient to him, and it was only with difficulty that he could be drawn away from his beloved Arcetri, so that his visits down into the city of Florence, other than those connected with his occupancy of the chair of astronomy at the University, were comparatively rare. The interesting circumstance of the Villa Giojello, where Galileo spent the last years of his life, lying close to the observatory, had always cast a spell over Abetti, and it is significant that he chose this theme for an eloquent oration which he delivered on a festal occasion at the University of Florence in 1901. This was proof enough of his love for his classic surroundings, and he would assuredly have echoed E. B. Browning's lines written from a near-by, but earlier and happier, home of the great Italian :—

“ From Tuscan Bellosguardo,
Where Galileo stood at nights to take
The vision of the stars, we have found it hard,
Gazing upon the Earth and Heavens, to make
A choice of beauty.”

Abetti married in 1879 Giovanna Colbachini, a lady of Padua, who died young in 1891, leaving two sons. The elder son, Dr. Mario Abetti, is the director of the hospital at Empoli, not far from Florence, while the younger son, Professor Giorgio Abetti, has succeeded his father in the directorship of the Arcetri Observatory.

Professor Antonio Abetti had been for many years a member of the Accademia dei Lincei.

He was elected an Associate of the Society in 1921.

W. A. P.

PIERRE PUISEUX was a son of the celebrated French mathematician Victor Puiseux, who brought him up to a love of science and mountains. At an early age he went from the *École Normale Supérieure* to the Paris Observatory, where all his scientific work was carried out.

At the outset of his career he was interested in celestial mechanics and particularly in tidal friction and the secular acceleration of the moon. He gave lectures at the Sorbonne on astrophysics and wrote on