

## OBITUARIES

### Andrew Claude de la Cherois Crommelin \*

By the passing of Andrew Claude de la Cherois Crommelin the B.A.A. has lost one of its most devoted and distinguished members. He joined the Association in 1895, was one of the Secretaries from 1900 to 1904, President in 1904-6, and held the Directorship of the Comet Section from 1898-1901 and 1907-1938, when the accident which led ultimately to his death compelled him to resign the post. For many years he had written the Comet Notes for the *Journal*, computed orbits, supplied ephemerides and issued the *Circulars*, and in 1938 he received the Walter Goodacre Medal and Gift in recognition of his great services to the Association.

Crommelin came of a well-known Huguenot family. He was the third son of the late N. D. C. Crommelin and a descendant of Louis Crommelin, the Huguenot founder of the linen trade in Ulster. He was born at Cushendun in Co. Antrim, and was educated at Marlborough, whence he gained a Scholarship at Trinity College,

\* For some of the details given in this notice—especially those relating to Dr. Crommelin's mathematical work—the writer is indebted to the Rev. Dr. M. Davidson.

Cambridge. He graduated as 27th Wrangler in 1886. In 1889 he joined the staff of Lancing, but two years later was appointed Assistant at the Royal Observatory, Greenwich, where he served till his retirement in 1927. During his time at the observatory he had charge in succession of the two altazimuths which were employed mainly for determining the positions of the Moon, but he also took particular interest in the study of comets. His work as a computer of cometary orbits gained him a world-wide reputation, but special mention must be made here of the part he took in conjunction with Dr. P. H. Cowell in the calculation of the return of Halley's Comet in 1910. The method employed for computing the perturbations of the planets was designed by Cowell, but it seems to have been Crommelin who first urged the importance of a thorough inquiry into the circumstances of the comet's path with a view to an accurate prediction of the date of its return. The work was very heavy, and a full account of it is given in the volume *Investigation of the Motion of Halley's Comet from 1759 to 1910*. The perturbations of all the planets (except, of course, Pluto) were taken into consideration, and the predicted date of perihelion was only three days in error—a wonderful triumph for the computers in view of the fact that the comet's period is about 76 years. It is noteworthy, too, that in the course of a series of joint papers published in *M.N.R.A.S.* the two authors traced the history of the comet as far back as the perihelion passage of 240 B.C. The degree of D.Sc. *honoris causa* was conferred on Cowell and Crommelin by the University of Oxford, and they were also awarded the Lindemann Prize of the Astronomische Gesellschaft. But while the method of computation employed gives great accuracy in its results, the large amount of labour involved renders it somewhat difficult for amateur computers, and Crommelin met the needs of these by publishing "Tables for Facilitating the Computation of the Perturbations of Periodic Comets by the Planets" in the *Memoirs of the R.A.S.*, vol. lxiv. These Tables give the coefficients of the perturbations as functions of the eccentricity and mean anomaly, and members of the B.A.A. Computing Section utilise them when the perturbations of Jupiter, Saturn, and also of the Earth and other inner planets are required.

But while it may be said that Crommelin's chief interest was in comets and their orbits, he showed a remarkable versatility and breadth in his knowledge of astronomy in general. He was blessed with a wonderful memory, and on almost any topic that might be raised at astronomical meetings or in the course of conversation he had something illuminating to contribute. Despite his encyclopædic knowledge, however—perhaps because of it—he was always kindly and considerate in discussion, and while outspoken in pointing out error, he did all he could to encourage the young astronomer. He was always broad-minded, able to appreciate others' points of view, and anxious to give due credit to all. As providing a single illustration among others which might be cited of this trait, we may recall the circumstances associated with the discovery of Pluto and Crommelin's

appreciation of the work of W. H. Pickering as well as that of Lowell.

Many of those whose memories go back to the earlier half of the Association's history regard Crommelin as one of the most successful—if not *facile princeps*—amongst the Presidents of that period. His two years in the chair will never be forgotten by those who sat under him, for, professional astronomer though he was, he was equally an amateur in outlook, and followed with the closest interest amateur work of all kinds. His interest in the topography and problems of Mars, the phenomena of eclipses, meteors, the Red Spot on Jupiter, the White Spots on Saturn, etc., may be mentioned as illustrations of his versatility, and for several years after the death of A. Marth, and prior to the inclusion of such data in the *Nautical Almanac*, he published in the *M.N.R.A.S.* ephemerides for the use of planetary and lunar observers. Crommelin's great love for astronomy in general was further shown by the fact that retirement from his professional duties did not mean retirement from astronomical work, and the Association in particular profited by his unabated interest and enthusiasm. It is indeed a tragedy that an accident which need not have been should have prematurely deprived the Association of his invaluable services.

As an eclipse observer Crommelin joined the B.A.A. expedition to Vadsö in 1896. He also attended the eclipses of 1900 (Algiers), 1905 (Majorca), 1912 (Paris) and 1927 (North Wales), but it was as a member of one of the two official parties sent out to observe the Eclipse of 1919 May 29—when he accompanied Mr. C. R. Davidson to Brazil—that he did his most important eclipse work. Photographs were secured which helped to establish the bending of rays of light from stars surrounding the Sun's place in the sky on their passage through the Sun's gravitational field as predicted by Einstein's Theory of General Relativity.

In the foregoing notes special emphasis has naturally been laid on Crommelin's work for the B.A.A., but his contributions to the Royal Astronomical Society were also numerous and valuable. In particular, for over forty years he communicated for inclusion in the Annual Report of the Council notes on the discovery of Minor Planets, researches relating to their orbits, and kindred matters, and he also wrote the notes on Comets. He served as one of the Secretaries of the Society from 1917 to 1923, and was President for the two years 1929–31. In addition to his more technical work Crommelin contributed articles to various journals and publications and wrote several of the chapters in *The Splendour of the Heavens*. His published books are: *The Star World*, *The Story of the Stars*, and *Comets*, the latter being written in collaboration with Miss Mary Proctor and appearing in 1937.

In 1897 Crommelin married Letitia, daughter of the Rev. R. Noble. She died in 1921. He had two sons and two daughters, but lost his elder son and younger daughter by a climbing accident on Scafell,

in the English Lake District, in 1933. His sister is Mrs. Masefield, wife of the Poet Laureate, and a cousin—Miss May Crommelin—is a well-known novelist.

A few sentences of a personal nature may perhaps be added here by the writer, who had not only met with invariable kindness from Crommelin through many years, but had been co-Secretary with him of another Society, and had enjoyed the privilege of close association with him at the Rome meeting of the I.A.U. in 1922. He is accordingly able to write of him with knowledge greater than that of mere acquaintance. A man of higher ideals and principles could not be found, and he carried them out faithfully and fearlessly. Many years ago he had joined the Roman Church, but those who differed from him widely on theological issues could not but be impressed by the strength and constancy of his faith in a world largely characterised by scepticism and controlled by materialistic aims. It is in affectionate remembrance of Crommelin, which will be shared by all who really knew him, that these notes have been written.—T. E. R. P.