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**OBITUARIES**

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**JAMES PATON**

James Paton's service to the Association as Director of the Aurora Section extended over more than twenty years. He took charge of the Section in 1952 and was working on an analysis of the 1972–73 reports at the time of his death, on 1973 August 26.

His early life was remarkably similar to that of another long-serving Section Director, Dr Cameron Dinwoodie, to whom I am indebted for the following notes. "Like me, Jimmy was a native of the mining village of Kelty in West Fife. We attended the local school before going on to secondary school, which in those days was Beath Higher Grade, Cowdenbeath. I went there in 1914, and from a newspaper cutting I still have, it appears that Jimmy followed me the next year. The cutting gives the record of the school closing ceremony in the summer term of 1916. It appears that I was first in one of the classes in the second year of what at that time was known as the Intermediate Department, while Jimmy was first in one of the first year classes. It was only a year or so after that that my father left Kelty to take up work in Edinburgh, so we lost touch with Jimmy until I went to Edinburgh University where we found we were doing the same course! I kept the list of graduates in Arts for 22nd July 1925, in which once more Jimmy and I appeared together, taking honours M.A. in Mathematics and Physics. Among those who were granted Honorary Degrees of LL.D. that day was A. S. Eddington."

After graduating, Mr Paton worked for a year with the Meteorological Office before returning to Edinburgh to teach in the University Natural Philosophy Department. He became Head of the Meteorology Department in 1964 and held that position till his death. He enjoyed outdoor life and the appearance of the sky, by day and by night, not only gave him great pleasure but stimulated his concern to understand the diverse phenomena of the atmosphere.

He assisted with the reduction of auroral observations made by a British expedition to Canada during the International Polar Year of 1932–33. The Norwegian auroral cameras used on that expedition to obtain parallax measurements of auroral heights were later used in Scotland; a small network of camera stations linked by telephone was controlled by him from his home in the small town of Abernethy in Perthshire. To enable him to keep a watch on the sky he had an attic room converted into a study, with a large window which faced north and commanded a magnificent view of the Firth of Tay and of the mountains beyond.

When the observations of the Aurora Section began to reach him he realized the potentiality of a network of visual observers and used his meteorological connexions to improve the coverage of auroral observation beyond what the

volunteers of the BAA could provide: some Meteorological Office stations were persuaded to supply hourly reports of the presence or absence of aurora; weather observers on ships were encouraged to make detailed observations of any displays they saw; civil aircrews were informed of the value of their reports. (I was a post-graduate student in Edinburgh University at that time, and Mr Paton was my research supervisor; since my work concerned the correlations between magnetic disturbances and auroral displays I became much involved in this British Aurora Survey, as it was called.) When the International Geophysical Year of 1957-58 came along, there was already in existence a means of obtaining the visual auroral observations that were seen to be a necessary part of that great international collection of geophysical data. The British Aurora Survey became the model for similar networks of observers in other European countries and one of the three World Data Centres for Visual Auroral Observations was set up at Edinburgh. The University provided special accommodation, which was named the Balfour Stewart Auroral Laboratory. (In 1956 I was in the Army, doing National Service. To the great astonishment of my unit, I was granted an early demobilization in order to take up an IGY Fellowship in the Laboratory. This was engineered by Mr Paton, whose powers of persuasion were of no mean order!)

The construction of synoptic charts of auroral activity had been begun before the IGY. The Laboratory was made responsible for a volume of the *Annals of the IGY* containing such charts for the whole of the northern hemisphere for the period of the IGY. The construction of such charts for the European sector has been continued at the Laboratory now through two maxima of solar activity. In addition to his work on the aurora, Mr Paton made a number of important contributions to the study of noctilucent clouds. This phenomenon is of considerable interest at the present time because of the clues it gives to conditions in the atmosphere at the height of these clouds, which is around 80 kilometres.

While members of the BAA knew James Paton because of his research work (and as an indefatigable writer of letters), many of his friends remember most vividly his abilities as a teacher. He had an unusual gift for making what would normally be regarded as dull subjects both interesting and instructive, and for inspiring enthusiasm in his students. (My third year at Edinburgh University included a course of lectures by Mr Paton on Heat and Thermodynamics. So interesting were these that in the fourth year several members of the class decided to attend again, along with the third year students. We did not pay many of our lecturers that kind of compliment! It turned out, however, that the lectures had not only been interesting: they had been put over so well that we found ourselves remembering them almost word for word! It was an odd and unforgettable experience.)

His wife, who had been in ill-health for many months, died early this year. The members of his family have our sympathy in this double loss. They may take comfort from the knowledge that many people have very happy memories of James Paton.

BENNET MCINNES