MIGRATORY MOVEMENTS OF BIRDS IN 1911–12.[1]

THE report before us forms vol. xxxii. of the Bulletin of the British Ornithologists' Club, and is written on much the same lines as the former reports noticed in NATURE. It affords a considerable amount of valuable information for those who are interested, and they are many, in the fascinating subject of bird-migration. The report is gradually growing, and the instalment for 1912 runs to no fewer than 335 pages. It seems to the writer that certain matter might well, indeed ought, to be omitted. This remark applies especially to the inclusion of practically the whole of the Scottish data for the autumn of 1911, which was published more than a year before by the Misses Baxter and Rintoul.

There are certain species of summer birds—and the marsh-warbler is one of them—about which we have insufficient data regarding the time of their appearance, and we might add departure. The species named is believed to be the latest of all summer migrants to arrive in England, and more information regarding its migrations would be most acceptable. Should not a special effort be made to obtain this? It is also very desirable to know—and this remark concerns all similar reports—on whose authority some of the species recorded are based. For example, who identified the rock-pipits recorded as occurring at the Outer Dowsing lightship in the earliest hours of the morning of March 20? Were wings sent as vouchers, or does the identification rest on the testimony of the light-keepers? Would it not be well to publish a list of all the wings received, or, perhaps better still, to star (*) the species the identification of which has been established by means of wings sent?

There are some *errata* in the report. Among them we note that the Scottish records for the occurrence of the common tern on the remarkably early dates of February 1, 4, and 24 are credited to the little tern! As last words, let us say that those who have not engaged in the preparation of similar reports have no idea of the vast amount of toil entailed. For this the members of the committee deserve our gratitude, in addition to our appreciation of the results of their labours. W. E. C.

SIR DAVID GILL, K.C.B., F.R.S.

DAVID GILL, whose death occurred in London on January 24, was born at Aberdeen on June 12, 1843. At the age of fourteen he was sent to the Dollar Academy, where Dr. Lindsay's teaching imparted to him a fondness for mathematics, physics, and chemistry. He then proceeded to Marischal College and University, Aberdeen, where his love of science increased and developed under the inspiring influence of Clerk Maxwell. He would have liked a scientific career, but his father, a prosperous Aberdeen merchant, wished his son to succeed him. Gill consented with reluctance to enter his father's business, and consoled himself by devoting all his spare time to physics and chemistry.

His special interest in astronomy began in the year 1863, when it occurred to him that Aberdeen was in need of an accurate time standard, like the time-gun which Piazzi Smyth had introduced in Edinburgh. David Thomson, Professor of Natural Philosophy in King's College, Aberdeen, gave Gill a letter of introduction to Piazzi Smyth, whom he visited at Edinburgh, and there made his first acquaintance with an astronomical observatory. On his return to Aberdeen, with Thomson's assistance, an old disused observatory of King's College was refitted. Every clear evening Gill and Thomson went to the observatory and worked with the transit instrument. The observatory possessed a good sidereal clock, and a mean-time clock was obtained, to which contact springs were affixed, so that other clocks, including the turret clock of the college, were controlled by electric currents sent each second from the standard.

When the time-service had become a matter of routine, Gill purchased a silver-on-glass speculum of 12 in. aperture and 10 ft. focus. He himself designed an equatorial mounting, and the heavy parts were made to his working drawings in the workshops of a firm of shipbuilders in Aberdeen. The driving circle, its tangent screw, and slow motion were made by Messrs. Cooke and Sons, but the driving clock with a conical pendulum was made by Gill's own hands. With this instrument he made observations of double stars, &c., and took photographs of the moon. A copy of one of these photographs was recently presented by him to the Royal Astronomical Society, and is of great excellence.

About this time Lord Lindsay (afterwards the Earl of Crawford) was considering the erection of an observatory at Dun Echt. He called upon Gill to examine the instruments and methods he had used in obtaining his lunar photographs. The acquaintanceship soon ripened, and he learned of Gill's wish to devote his time entirely to science. It thus happened that in 1872 the Earl of Crawford offered to Gill the post of director of the observatory which his son was about to erect. Gill had married in 1870, and the acceptance of Lord Crawford's offer involved a considerable pecuniary sacrifice; but neither he nor his wife had any hesitation in gratefully accepting a post which was in such entire accordance with his tastes and interests.

The years 1872–74 were accordingly busily employed in cooperation with Lord Lindsay in the design and erection of the new observatory. Two of the instruments, the transit circle and 15-in. equatorial, were twenty years later presented to the Government, and formed the nucleus of the new Royal Observatory at Edinburgh. A third instrument was the 4-in. heliometer, which was afterwards used to such good purpose at

[1] Report on the Immigration of Birds in the Spring of 1912; also on Migratory Movements in the Autumn of 1911. (London: Witherby, 1913.) Price 6s. net.