

At the same time, most of Donisthorpe's knowledge of ant behaviour was learnt in the field in the manner of the old school: it was learnt by his wanting to know more about their habits because he wished to collect more specimens or obtain the queens.

Personally, Donisthorpe was a great character. The last time I saw him he recounted again with pride

how in his twenties he had swum across the Rhine near Heidelberg, a feat which, so it was said, no one had achieved before. Lately, he persevered in his attempts to continue going to the British Museum (Natural History) each day, or at least for some days each week, until his death.

DEREK WRAGGE MORLEY

## NEWS and VIEWS

### Mathematics at Birmingham:

Prof. G. N. Watson, F.R.S.

THE chair of mathematics in the University of Birmingham will be vacated at the end of the present session by Prof. George Neville Watson, who has held it since 1918. Prof. Watson, who was born in 1886 and educated at St. Paul's School and Trinity College, Cambridge, was senior wrangler in 1907 and became a Fellow of Trinity in 1910. He was elected to the Royal Society in 1919 and became successively president of the Mathematical Association in 1932 and of the London Mathematical Society in 1933. He is a Gold Medallist of the Danish Royal Academy of Sciences, and among other distinctions is an honorary LL.D. of the University of Edinburgh. Prof. Watson's name first became known by several important memoirs on asymptotic series, which were followed by a series of papers in which he found asymptotic expressions and approximations for all sorts of functions by the method of steepest descents (a term coined by him and which is now standard). About 1917 many of the ablest mathematicians were attempting to sum a difficult series which had presented itself in connexion with the diffraction of wireless waves around the earth. Prof. Watson solved the problem, and went on to study the transmission of electric waves when it is assumed that the earth is surrounded by a concentric conducting layer. Other celebrated researches were concerned with general transforms and the Rogers-Ramanujan identities. Prof. Watson is well known to all honours students of mathematics by two books, "Modern Analysis" (written in conjunction with Sir Edmund Whittaker) and the "Theory of Bessel Functions", perhaps the most important single work that has ever been written on the analysis of functions.

Dr. R. A. Rankin

PROF. WATSON is to be succeeded by Dr. Robert A. Rankin, at present lecturer in mathematics in the University of Cambridge. From Fettes College Dr. Rankin went up in 1934 to Cambridge, where he is now a Fellow of Clare College; he was a wrangler in 1936, and took a distinction in Part 3 of the Mathematical Tripos the following year. He started on a research career in the field of the theory of numbers, and five papers appeared before the end of 1940. Shortly after the outbreak of the Second World War, groups of research students were recruited to defence departments to expand their limited effort, and Dr. Rankin was among the first team to join the relatively new Projectile Development Establishment of the Ministry of Supply, formed to develop rockets. The theory of numbers was scarcely applicable, but his quality as a mathematician was soon obvious, first in day-to-day development problems of rocket weapons, and later in a more fundamental way. He became a leading member of

Prof. L. Rosenhead's ballistics branch and was to put on a firm foundation the mathematics of rocket theory, particularly that of spinning rockets. This work has been published (*Phil. Trans. Roy. Soc., A*, 241, 457; 1949) and places on record a paper comparable to that of Fowler, Gallup, Lock and Richmond on the spinning shell, which was the fruit of research of the First World War. Since then Dr. Rankin has returned to the theory of numbers, and has already to his credit a long list of research papers on the differences between consecutive prime numbers and the properties of the coefficients of modular forms. More recently he has turned his attention to problems in linear forms and has discussed such problems as the packing of convex bodies and associated problems in the geometry of numbers.

### United States Office of Naval Research

DR. EMANUEL R. PIORE has recently been appointed deputy and chief scientist of the United States Office of Naval Research, in succession to Dr. Alan T. Waterman, now director of the National Science Foundation. Dr. Piore graduated in physics from the University of Wisconsin in 1930 and took his Ph.D. there in 1936. During 1938-42 he was engineer in charge of the television laboratories of the Columbia Broadcasting System, interesting himself in the development of colour television. After service during the Second World War as a senior physicist in the Navy's Bureau of Ships and then in the Navy Reserve as a lieutenant-commander, he joined the Office of Research and Inventions (later to become the Office of Naval Research) in 1946 as head of the electronics branch, and since 1949 he has been deputy for natural sciences. Dr. Piore's previous post at the Office of Naval Research has been filled by Dr. Randal N. Robertson, formerly director of the Physical Sciences Division of the Office. Dr. Robertson will be responsible for research in the earth, physical and mathematical sciences. He went to the Office of Naval Research in 1946 from the Radiation Laboratory of the Massachusetts Institute of Technology, where he had been engaged in war-time research and development of airborne radar bombing systems.

### "Science News"

SEVERAL recent articles have commented on the outstanding advances in science and particularly in physics made during the past fifty years and on the profound effect these advances have had on our everyday life. The importance, both to industry and to science, of informing, without undue delay, as wide a public as possible of the investigations being undertaken by men of science, of the results obtained and of their implications has been correctly emphasized. Whereas the scientific periodicals of the various professional bodies have for long catered for the specialists and research workers, it is only com-