

Later Mott turned to semi-conductors and insulators, throwing light on the physical processes involved in the formation of oxide films, and in the electrical conductivity which can be induced by various means in polar crystals. His theory (with Gurney) of the formation of the latent image in a photographic emulsion has found general acceptance, and has stimulated fresh experimental work in research departments of the industry.

This striking record of published work was achieved between 1928 and 1939.

When war broke out Mott found that his activities as a quantum physicist had no direct application to the War. It is a tribute to his versatility and flexibility of mind that he could turn so quickly to a new field in classical physics, and make important contributions to the practical problem in connexion with which he now holds an important post.

ABORIGINAL AUSTRALIAN STRING FIGURES

AS time goes on, more and more attention is given to primitive man in his physical, mental and cultural aspects, and among the last-named may be classed that singularly fascinating and complicated pursuit known to us as string figures. It is now nearly forty years since the first collection of string figures was made and described from Torres Straits by Rivers and Haddon, and since then there has been a steady interest in the subject and a mounting number of collections made in different parts of the world. The latest is embodied in an article by D. S. Davidson (*Proc. Amer. Phil. Soc.*, 84, No. 6; Aug. 1941) in which he sums up our present knowledge of the subject and adds a most interesting collection made by him from the Australian aborigines.

That a goodly store was to be collected there was evident from Roth's illustrations of numerous Queensland figures, unfortunately without directions for their making, published in 1902; from some collected by myself from a few restricted areas in 1914, and from Stanley's collections, again from north Queensland, in 1926. Mr. Davidson's studies form a much-needed addition to our knowledge of the subject and are the more valuable in that he traces the possible connexions of these Australian figures with those occurring in other parts of Oceania. According to his conclusions, string figures are of comparatively recent introduction into Australia from Melanesia, as they are found in greatest numbers in north-west Queensland, whereas in Western Australia they are

almost lacking and what exist are of recent introduction.

Mr. Davidson considers that Australia, Melanesia, Micronesia and Polynesia comprise a major string-figure area, and from the evidence of the string figures themselves suggests the possibility that they were brought into the Pacific by the Polynesians or Micronesians, and spread from the west into New Guinea and western Melanesia late in the pre-Polynesian period. He suggests also that the diffusion of string figures into the New World and Africa from some Asiatic point of origin might have taken several thousands of years, but he does not appear to consider their possible spontaneous generation in unrelated areas. This is known to have occurred recently among the Brahmins in India and seems likely to be an explanation of their world-wide distribution, seeing that string—or its equivalent—is co-existent with man.

Mr. Davidson has described and illustrated some seventy string figures and in addition gives a comparative chart of their distribution; there is also a bibliography. If one might venture a criticism of one of his descriptions, taking a loop off a digit would seem to indicate removing it, whereas in "Movement Z" it means making the loop common to right and left thumbs. But this is a detail and in no way impairs the interest and value of the contribution.

K. RISHBETH.

THE MOA IN NEW ZEALAND

A RECENT valuable contribution to the natural history of New Zealand by Dr. G. Archey dealing with the moa* fully maintains the high reputation of the ornithologists of that country, and both the author and the Council of the Auckland Institute, who sponsored the work, merit our congratulations.

Almost from its inception the study of the moas has been accompanied by considerable confusion and uncertainty owing to the insufficient definition of types, and to the frequently erroneous association of different parts of the skeleton, an unsatisfactory state of affairs which Dr. Archey determined to remedy. After much patient work involving the examination of types and other specimens both in New Zealand

and in England he has produced this excellent monograph of the moas.

Perhaps the most urgent need was for a knowledge of the associated skeleton in the various forms, and in accumulating material for this the author tells how greatly he was helped by many enthusiastic field workers who, since 1930, have discovered and collected in different parts of the North and South Islands no less than fifty fairly complete skeletons, and more than a hundred partial sets of bones of individual birds. Among the facts revealed by this mass of authentic associated material is the hitherto unsuspected occurrence of parallelism in one division of the moas. The author writes "... that two subfamilies with widely differing skulls, sterna and phalanges have independently embarked upon identical courses of development of shorter and heavier

* The Moa: a Study of the Dinornithiformes. By Gilbert Archey. Bulletin of the Auckland Institute and Museum, No. 1. Pp. 119+15 plates+9 tables of Measurements. (Auckland: Auckland Institute and Museum, 1941.)