

Dr. K. Landsteiner, For. Mem. R.S.

WORKERS in the field of medical research in Great Britain will wish to join in congratulating Dr. Karl Landsteiner, of the Rockefeller Institute in New York, on his recent election, and will regard the honour as being a well-merited tribute to the high level of the scientific work he has pursued with unremitting vigour during the past forty years. Three outstanding achievements will forever be associated with his name: the discovery of individual differences in human blood which account for the four well-defined groups; the demonstration, together with E. Popper, that the causal agent of acute poliomyelitis is transmissible to monkeys; and the series of notable contributions he has made towards elucidating the nature of the specificity of immunological reactions.

Dr. Landsteiner was an assistant in the Institute of Pathology of the University of Vienna when, in 1901, he first published his work on iso-agglutination and the blood groups. Even at this early date he was aware of the probable significance of his results for medico-legal purposes, and in the practice of blood transfusion; and the value of his pioneer researches on the subject was attested when, in 1930, he was awarded the Nobel Prize in Medicine. The two first papers on the experimental transmission of poliomyelitis to monkeys appeared in 1908 and 1909, and they pointed the way to the subsequent intensive study by himself and by many other workers of the mode of transmission of the causal virus and of its neutralization by a specific immune-serum. In later years Landsteiner and his collaborators have been occupied chiefly with the chemical aspects of immunity. Their investigations and, in particular, the ingenious experiments with artificially conjugated antigens and the corresponding immune-sera have shed much light on the nature of the serological specificity of proteins and cell antigens.

Plankton as a Source of Food

THE interesting article which we publish in another column (p. 695) is of special importance inasmuch as it is from the pen of a distinguished leader in the investigation of marine plankton and its distribution. As the first occupant of the chair of zoology in University College, Hull, Prof. Hardy has wisely borne in mind its proximity to the great fishing-port of Grimsby, and has directed the policy of his department along lines which, as he believes, will lead towards increased prosperity of the fishing industry. The ingenious apparatus which he has devised for towing behind a moving vessel and registering a continuous record—quantitative and qualitative—of the plankton present along the route traversed is well known to all interested in plankton research, and it may well be that the not distant future will see this apparatus installed as part of the regular equipment of vessels engaged in the fishery of those important food-fish—such as herring, pilchard or mackerel—which, subsisting on particular types of plankton, tend naturally to concentrate where their favourite food happens for the time being to be most abundant.

Prof. Hardy, on the whole, supports Sir John Graham Kerr's plea for the appointment of an expert committee to examine into the practicability or otherwise of drawing upon the plankton directly for the reinforcement of the food supply of Great Britain. He emphasizes the nutritive value of plankton. He quotes chemical analyses, which we find perhaps less impressive since an encounter many years ago with a destructive beetle larva which was able to subsist upon a diet of dry cork, and out of it—in apparently complete defiance of all dietetic principles—to build up living protoplasm indistinguishable chemically from that of a human being. But Prof. Hardy tells us too how not long before the outbreak of war, German researchers reported upon two different types of plankton as being respectively equivalent in nutritive value to 'the best meat' and to rye flour. Finally, he quotes the case of the whalebone whales, and, unmindful of the reminder conveyed in a charming leading article in *The Times* regarding their ungainly portliness, the more seriously directs attention to the extraordinarily rapid growth of the young whale as incontrovertible evidence of the nourishing qualities of its food. The practical suggestions made by Prof. Hardy in regard to the large-scale collection of plankton, are, in view of his special knowledge, worthy of attention, and no less so his hint that the preliminary stages in the working out of the plankton-food problems might well be undertaken during the present summer.

Coastal Plankton of New South Wales

PROF. W. J. DAKIN has been working for nine years at the study of plankton off Sydney Harbour. The difficulties were many, but a great deal has been accomplished which acquires a deeper significance when one realizes that it is the preliminary to further fisheries researches in the future. A small yacht only was available, but with this, fortnightly samples of plankton with accompanying hydrographic data (the last only for the first three years) were taken almost continuously. The results, which include much original work not published elsewhere, are now available ("The Plankton of the Australian Coastal Waters off New South Wales. Part 1." Publications of the University of Sydney. Department of Zoology. Monograph No. 1. By William J. Dakin and Alan N. Colefax. 1940). There is, however, much more in it, for it is a general guide to Australian plankton indispensable to all who study the subject in these waters, the introductions give a good survey of each group, and almost every organism is described and, in most cases, figured. Lists of relevant literature are given at the end of each section and certain specialists have helped in identifications. Mr. Takari Tokioka's contribution on the Chaetognatha with its beautiful figures is noteworthy. Mr. Alan Colefax is responsible for the large and detailed section on the Copepoda and also for the chemical analyses.

Prof. Dakin is the author of the main part of the work. Among the Crustacea his notes on life-histories are valuable, especially among the Decapods. The larval stages of the Australian Decapods are little