

dual obedience to the additive law of colour-matching is of the first importance in visual theory. The bearing on colour specification in the C.I.E. system is of a different kind, and the practical outcome is perhaps less disturbing than might at first appear. If, as seems probable, additivity ambiguities are of no higher order of magnitude than individual differences in colour-matching properties and differences arising from the wide range of practical conditions of colour observation, the extra load on a 'standard observer', who must represent a compromise over all these variations, may not be great. But the problem of the best compromise is changed, and until we have a clearer picture of the additivity difficulties we would be ill-advised to alter the present system. This is so, even though on some points—such as the values of the colour-matching functions in the extreme blue, which are shown by all the new work to be too low in the C.I.E. system—some improvement would be possible now. For colour technology, a change in the C.I.E. system means an upheaval—computations of new tables, adjustments of all kinds of colour specifications, modification of physical colorimeters, etc.—and it would be unthinkable to make an interim change now with the possibility of a further change a year or two later.

\* *Note added in proof.* Prof. Wright has made additional measurements which avoid an uncertain interpolation previously involved. He now finds virtually no difference between the unit co-ordinates of the spectral colours obtained by the use of 'blue' primaries 445 and 460 m $\mu$ , respectively. The National Physical Laboratory comparisons, since available, also show only slight differences in the unit co-ordinates, although there appears to be a small change in the 'blue' colour-matching function.

W. S. STILES

## OBITUARIES

### Dr. R. N. Salaman, F.R.S.

IN Redcliffe Nathan Salaman, whose death occurred on June 12, aged eighty, the world has lost one of the grand old men of science. He was one of the very few remaining representatives of a world of learning that had not known the spectre of modern specialization, a world where the boundaries between one science and another were scarcely recognized and even those between science and the humanities were comfortably bridged. Dr. Salaman's whole life and work illustrated this.

Born in September 1874, he attended St. Paul's School and became a scholar of Trinity Hall, Cambridge, where, though he was for some unaccountable reason never a Fellow, he was a familiar figure in the combination room for many long years. He began his scientific career in medicine, at the London Hospital, and in 1901 was made director of the Pathology Institute there. But this was the time when the spectacular rediscovery of the Mendelian laws of heredity had given birth to the new science of genetics; Salaman was one of the first in Great Britain to become interested in Mendelism and soon joined William Bateson's original group of British geneticists.

It was characteristic of him that his interest in the Mendelian laws embraced both their direct implication in relation to studies of the origin and relationships of racial groups in man and their

indirect use in the improvement of one of man's chief food crops, the potato. In both these fields he published some of the first scientific studies; he was made director of the Potato Virus Research Station at Cambridge on its foundation, and in his work there was the first to make use of a wild relative of the domestic potato, since recognized as the Mexican species *Solanum demissum* or a derivative, in order to introduce resistance to potato blight, *Phytophthora infestans*, into cultivated potatoes. To this day *S. demissum* remains one of the main sources of resistant genes.

Salaman it was who in 1930 recognized the dawn of a new epoch in potato breeding with the Russian discovery of a whole polyploid series of relatives of the potato—some wild, some cultivated—growing in the Andes in South America; he took an active interest in the expedition sent by the British Commonwealth to collect these potatoes and in the foundation of the Commonwealth Potato Collection and the Potato Research Station at Cambridge which resulted from the expedition. Characteristically again, Salaman's imagination was fired by these potatoes just as much for their anthropological as for their genetical and agricultural significance; indeed, his book on the subject, entitled the "History and Social Influence of the Potato", is cited as much by historians and anthropologists as it is by geneticists or plant breeders; for these latter Salaman's researches have thrown light on the origin of the cultivated potato, its early introduction into Europe and its relationship to other, more primitive, potato species. For all readers it serves as an illustration of how an eminent scientist may yet be a master of English literary style—a fact also appreciated by anyone who has attended one of the many lectures that Salaman was so often called upon to deliver.

In 1935 Salaman was elected to fellowship of the Royal Society. In spite of his multifarious activities in the fields of medical pathology, plant genetics, phytopathology and anthropology, he was one of those busy people who always find time for something else. Living as a country gentleman at Barley in Hertfordshire, he was surrounded by a large family, took an active part in local good works, and in the critical years of the Nazi and other persecutions made an energetic contribution to the activities of the Council for the Protection of Science and Learning. In London he was a familiar figure in the rooms of the Athenæum, and there are few men of the present day who can be said to have led a more varied and constructive life, embracing so wide a field of diverse interests and activities.

P. S. HUDSON

### Prof. D. B. Blacklock, C.M.G.

THE death occurred on June 10 of Donald Breadalbane Blacklock, emeritus professor of tropical hygiene in the University of Liverpool. He was born on January 7, 1879, at Oban, Argyllshire, and was educated at Fettes College and at the University of Edinburgh, where, after a distinguished career both in studies and in sport (he played cricket for the University and rugby for Edinburgh Wanderers), he graduated M.B., Ch.B. in 1902, proceeding to the degree of M.D. in 1909. In 1911 he was appointed to the Runcorn research laboratory of the Liverpool School of Tropical Medicine, where he worked, first as research assistant and later as director, until 1914, when he was appointed lecturer in parasitology to the Liverpool School.

During this early period of his career, Blacklock published a series of twenty-one papers on trypanosomiasis, most of them in his own name, but some in collaboration with Warrington Yorke. They were chiefly concerned with the morphology of trypanosomes; but in one of them the important discovery was recorded that *T. cruzi* could undergo development to the infective stage in the bed-bug.

In 1914, Blacklock and Yorke joined the School's thirty-second expedition, which was dispatched to West Africa, and, while in Sierra Leone, studied the breeding places of *Glossina palpalis* and the various species of trypanosomes transmitted by the fly to man and his domestic stock. By the time that the expedition had returned to England, war with Germany had broken out. Blacklock joined the R.A.M.C. and served with it, both at home and abroad, from 1915 until 1919, actively continuing with research during his period of service, and collaborating with Stephens, Yorke and other colleagues in a symposium of more than thirty papers on the treatment of malaria.

In 1921, when the Sir Alfred Lewis Jones Research Laboratory was opened in Freetown, Sierra Leone, by the Liverpool School, Blacklock was appointed its first director and was given the title of professor of tropical diseases of Africa by the University of Liverpool. The eight years which followed represent the most active and productive part of Blacklock's long scientific career. During that time he published more than forty papers on a wide range of problems concerned with various aspects of schistosomiasis, beriberi, malaria, trypanosomiasis and goitre, the most outstanding of which demonstrated for the first

time that *Onchocerca volvulus* was transmitted to man by *Simulium damnosum*—a discovery of notable importance in the history of tropical medicine. In 1929 Blacklock returned to Liverpool to succeed Yorke in the Walter Myers chair of parasitology, which he held until 1934, when he was appointed the first holder of the newly established chair of tropical hygiene.

During the Second World War, Blacklock, then nearly sixty-five, was sent to Freetown on a Government mission with the rank of surgeon-captain to investigate the malaria situation at the port and to submit recommendations for its control. His report led to a concentrated attack on the vector anophelines and resulted in the elimination of malaria from the port and the protection of convoys using it. For this and other notable services he was awarded the C.M.G. in 1942.

He retired from the chair of tropical hygiene in 1945, and in 1949 the Liverpool School of Tropical Medicine presented him with the Mary Kingsley Medal, as a fitting tribute to his work in West Africa and elsewhere.

Blacklock was a man of striking presence, handsome in appearance, gentle and reserved in manner, his innate kindness lit from time to time with flashes of brilliant wit. His clear incisive mind made him an excellent lecturer, and his text-book on human parasitology, written in collaboration with Dr. Thomas Southwell and now in its fifth edition, is proof of his powers as a teacher.

He is survived by his wife, Dr. Mary Georgina Blacklock, C.B.E., who accompanied him on his many travels and who collaborated in some of his scientific work.

R. M. GORDON

## NEWS and VIEWS

### Applied Mathematics at Sheffield:

Prof. D. N. de G. Allen

MR. D. N. DE G. ALLEN, reader in applied mathematics at the Imperial College of Science and Technology, London, has been appointed to the newly created chair of applied mathematics in the University of Sheffield. Mr. Allen is a graduate of the University of Oxford, and received his early training in research under the direction of Sir Richard Southwell at the University Engineering Laboratory, where he became interested in the newly developed relaxation methods as applied to engineering problems. Later, when Sir Richard became rector of Imperial College, Allen accompanied him there and played a large part in the establishment of a research team concerned with relaxation methods. He was appointed lecturer in the Mathematics Department of Imperial College in 1945, and later became reader, then taking over much of the responsibility for the teaching of mathematics to students of engineering. Under his guidance there has grown up at the Imperial College a thriving and productive group of research workers able to apply successfully relaxation techniques to a variety of mathematical problems of engineering interest. In 1949 Allen visited the Massachusetts Institute of Technology to deliver courses of lectures on subjects related to his own field of research, and later, in 1954, he paid a short visit to India for the same purpose. In addition to his interests in teaching and research, Allen has played

a full part in the general and social activities at the Imperial College, and though he will be greatly missed by all his colleagues there, he takes with him their very good wishes to his new responsibilities at the University of Sheffield.

### University College of Rhodesia and Nyasaland:

Prof. E. B. Edney

THE appointment of Dr. E. B. Edney, reader in Entomology in the Department of Zoology and Comparative Physiology, University of Birmingham, to the chair of zoology in the newly created University College of Rhodesia and Nyasaland, Salisbury, Southern Rhodesia, cannot fail to please those concerned about the future of academic biology in the British Commonwealth. Dr. Edney is an entomologist with a distinguished research record in the field of arthropod physiology and ecology, where his work on water relations and microclimatology has produced results of considerable theoretical and methodological importance. As a systematist, he has specialized in the taxonomy of two widely different arthropod groups, the Chrysidae and Isopods, and has published monographs on both. His past association with academic work in Africa at Rhodes University College, at the National Museum in Bulawayo and at Makerere College, Uganda, has recently been rounded off by a successful research expedition to the Sahara. As a senior member of the teaching staff of the Zoology Department in Birmingham, Dr.