

printing, photographic, glass and decorating industries), the painting art and the colour terms of everyday speech. The definitions are fully descriptive, and sufficient explanation of the underlying principles is given to make clear how certain expressions have come into use. In colour physics, once the distinction has been established between subjective terms describing the sensations produced and the corresponding objective terms specifying the stimulus, the definitions themselves present no serious difficulty. The case is different with technological terms. For example, in the paint and pigment industry, the term 'chalky' has a meaning which in the Committee's definition runs "An excess of white (in a match supposed to be close)". But, as is pointed out, in practice, 'chalky' frequently implies that by the addition of wrong pigments or otherwise, a pigment mixture has been made whiter than the sample and that the difference is irremediable.

The colour terms used by contemporary artists are handled very gingerly by the Committee—the proper course for an exclusively technical body—and for these and for the terms of ordinary speech no recommended usage is put forward.

The interrelations of the terms of different groups are displayed in tabular form, and in the case of the dyeing and paint and pigment industries, the different meanings of comparative terms such as 'stronger', 'dirtier', 'brighter', etc., are indicated by vector lines in colour triangles of the Ostwald type with black, white and a particular colour at the vertices.

As a first step to co-ordination the Committee drew up a self-consistent list of essential terms that could be used by all colour workers without risk of confusion. The final recommendations are based on this self-consistent list and cover nearly a hundred terms.

The main changes required of different groups are as follows. In colour physics, the term 'brightness' is to be replaced by 'luminosity' when the subjective aspect is in question, and by 'luminance' when brightness as an objective or stimulus quantity is intended. The term 'shade', which at present has several different meanings in the dyeing, paint and pigment and printing industries, is to denote "darker colour of same hue and saturation". The same groups are asked to reserve 'tone' for "any small variation from another colour". 'Duller' (paint and pigment industry) is not to be used to mean "containing more black" but as "less colourful" or "less saturated", while 'deeper' is to mean "containing less white".

In a concluding section the recommended terms are compared with those proposed in the recent Colorimetry Report of the Optical Society of America. Among the comparatively few points of disagreement may be noted the American retention of the term 'brightness' for the subjective meaning of the word, while the corresponding term recommended by the British committee—'luminosity'—is used in the American report for the "ratio of the luminous flux to radiant energy flux". The latter quantity is called 'visual sensitivity' in the British scheme. It is probable that the terms 'luminosity' and 'visual sensitivity' will prove the most controversial in the Committee's recommended list.

Discussions on terminology often appear to non-participants as rather unproductive. But whether or not the changes recommended in this report are adopted, there can be no question that the careful exposition of present usage which it contains will be of the greatest value to workers on colour problems.

W. S. STILES

NEWS and VIEWS

Geology at the University of Liverpool:

Dr. R. M. Shackleton

DR. ROBERT MILLNER SHACKLETON, who has been appointed to the George Herdman chair of geology at Liverpool, vacant by the resignation of Prof. F. Coles Phillips, returns to the University from which he graduated in 1930 and at which he was awarded the degree of Ph.D. in 1933 for researches into the complex structure of Moel Hebog, Caernarvonshire. On leaving Liverpool, Dr. Shackleton went to the Imperial College of Science and Technology, London, with a Beit Fellowship, and joined the staff of the Geology Department of the College in 1934, becoming senior lecturer in charge of petrology in 1946.

Dr. Shackleton's field-experience has been extraordinarily extensive and varied. He has travelled widely in South and Central Africa and in Russia and Siberia. In 1935–36 he made a reconnaissance survey of Viti Levu in the Fijis, where he discovered that the plutonic rocks, previously thought to be an old basement, are of Tertiary age. During 1940–45, he served on the Geological Survey of Kenya, his chief work dealing with economic problems connected with the Migori gold-belt, the phosphate possibilities of North Kavirondo and the water supply of the Aberdare Range and Mount Kenya areas. In 1946 he returned to Kenya and made a one-man expedition to the Rift Valley, where the sequence of the artefact-bearing beds of the Pleistocene was determined and

the structure of a section of the Rift Valley elucidated. Last year he took part in the Royal Society Expedition to Rusinga Island in Lake Victoria, Kenya, from which important results concerning the succession and structure of the Miocene beds in which hominoid remains occur are expected. It is to be hoped that Dr. Shackleton will find time to prepare for publication a part at least of these important results of his field-studies.

Dr. Shackleton has been a member—and largely director—of a research team from the Geology Department, Imperial College, that has been working for a number of years on a project to compare the two sides of the North Atlantic and to test the continental drift theory and in particular to determine the magnitude of any drift that may have occurred. As soon as the grasp of the structure and stratigraphy on the eastern side of the Atlantic is sufficiently firm, it is intended to proceed to the examination of Eastern Newfoundland and the coast of Labrador. His new sphere at Liverpool will provide Dr. Shackleton with increased opportunities for the continuation and completion of this attractive study.

Physiology at the Queen's University, Belfast:

Dr. A. D. M. Greenfield

THE Queen's University of Belfast announces the appointment of Dr. A. D. M. Greenfield to the Dunville chair of physiology in succession to Prof. H. Barcroft, now at St. Thomas's Hospital Medical