

its functioning, and this is not dependent upon exercise or intensified function in those parts of the nervous system in which it occurs, as was supposed by those who wrote before adequate data concerning the correlations between the growth processes and behaviour became available. Such is the argument in brief outline. It will be seen that it depends not only upon accurate observation of behaviour but also on trustworthy evidence concerning the anatomical mechanisms involved. The behaviour is the easier to observe. Are we sure that the histology which is so fast becoming a convention is beyond reproach?

*Die Entstehung der Kontinente und Ozeane.* Von Prof. Dr. Alfred Wegener. (Die Wissenschaft, herausgegeben von Prof. Dr. Wilhelm Westphal, Band 66.) Vierte umgearbeitete Auflage. Pp. x+231. (Braunschweig: Friedr. Vieweg und Sohn A.-G., 1929.) 10 gold marks.

THE fourth edition of Wegener's "Entstehung der Kontinente und Ozeane" is greatly enlarged and improved. For example, of the previous illustrations 12 are omitted, but the total number is increased from 44 to 63. The author naturally directs attention to the widespread new support to his hypothesis, especially among meteorologists and physicists, and its adoption by some geologists such as Argand, Staub, and Matley. He mentions some recent criticisms, as in the symposium arranged by the American Institute of Petroleum Geologists, but fails to meet the arguments there put forward.

The new edition directs attention to the seismic work on the rate of earthquake waves under the Pacific. In an appendix in support of the view that longitude determinations prove the westward drift of America, though the author reduces his estimate for the annual increase in the distance between Washington and Paris to a third of a metre, he claims this amount on the basis of longitude observations in the years 1913 and 1927. These results, however, are inconsistent with those given by longitude determinations between Washington and Greenwich in 1913 and 1926. According to Sir Frank Dyson, they show a total decrease in the distance of 30 ft. instead of the reported annual increase of one foot. The author does not notice some of the later work in criticism of the longitude determinations upon which he claimed the rapid westward drift of Greenland. One of the new illustrations deals with the mode of formation of the island festoons of the western Pacific, but it does not seem to represent the actual geological conditions.

The one serious defect in the new edition is the omission of the index, which is especially inconvenient owing to the rearrangement of the book, and the consequent trouble to those who wish to see what modifications have been made in sections of the discussion that specially interest them.

*The Journal of the Institute of Metals*, Vol. 41. Edited by G. Shaw Scott. Pp. xii+825+42 plates. (London: Institute of Metals, 1929.) 31s. 6d. net.

IN the course of its twenty-one years of existence the Institute of Metals has rendered great services to the science of metallurgy, and has been the

means of encouraging research into many metallurgical problems. Its latest volume contains a number of valuable papers. Sir Oliver Lodge's May lecture will be read with interest, consisting as it does of personal reminiscences of scientific discovery in connexion with the electrical and magnetic properties of metals, with suggestive speculations as to the nature of their underlying causes. Good work is being done in Great Britain in the difficult but important field of the establishment of equilibrium diagrams for alloy systems, and the systems magnesium-zinc and cadmium-gold have been added to those which have been studied in the light of modern ideas as to equilibrium in solids, whilst the volume also includes a further study of the age-hardening of certain aluminium alloys, a phenomenon of technical importance which has now been shown to be much more general than had been supposed.

The international character of the Institute is illustrated by a paper on eutectics by Prof. Saldau of Leningrad, and there are several communications dealing with matters of practical and industrial interest. A report which is of value to physicists as well as to metallurgists is that by Miss Elam on the results so far obtained in the study of alloys by means of X-rays. This is a most useful compilation, which will save much labour in searching for references. The abstracts, which form a large portion of the volume, are another valuable feature.

*Practical Color Photography.* By E. J. Wall. Pp. vii+280. (London: Chapman and Hall, Ltd., 1929.) 15s. net.

*Amateur Cinematography.* By Capt. Owen Wheeler. Pp. xi+135. (London: Sir Isaac Pitman and Sons, Ltd.; Henry Greenwood and Co., Ltd., 1929.) 6s. net.

*Heracitus: or the Future of the Films.* By Ernest Betts. (To-day and To-morrow Series.) Pp. 96. (London: Kegan Paul and Co., Ltd.; New York: E. P. Dutton and Co., 1928.) 2s. 6d. net.

THERE are some subjects nicely compounded of general and particular interest, such, for example, as photography. In this, too, where amateurs frequently excel, not a few professionals fail from the artistic point of view. The three recent books on this art referred to above merit attention. Mr. Wall evinces a mastery of his subject, though it lacks presentation in a pleasing form; the trees hide the forest. His reference to juxtaposition of colours in preference to superposition is deserving of attention. Capt. Wheeler provides a most attractive book, and it is amusing to read his and Mr. Betts's references to the 'some-day' appearance of the talkie film. Capt. Wheeler regards it as "long distant"; Mr. Betts hopes it will be long distant; it has arrived, however, rather prematurely. Mr. Betts's subject is, *par excellence*, the future of the film, and with it he pictures the combination of television for political propaganda. "Elections may yet be won on good looks rather than fine words, and no doubt we shall be quite as well off."

P. L. M.