

activity of the chlorophyllaceous cell in the sunlight. The curvature of twining stems is not thigmotaxis (p. 443). The use of the phrase 'conduction of a stimulus' to indicate the transmission of an impulse from the point of reception of the stimulus to a reaction zone is a mistake resulting from the literal translation of 'Reizleitung.' The German word 'Reiz' having a broad meaning which permits its use to designate both the stimulus and the stimulus-effect. 'Every change in the external conditions of an organism constitutes a stimulus;' but it is to be presumed that no one would mean that these changes in the intensity of external energy, rather than the shock of such change, are transmitted by nerves or other conducting mechanisms.

Perhaps the most remarkable omission in the entire work is that which occurs in the discussion of the history of death. No attention is given to the aging or senescence of cells, and there is no mention of any example of the plant cell in the histolytic processes, or metamorphic death, although this phenomenon is of such importance that all types of plants furnish dead cells from normal atrophies and degenerations, while in the higher types the greater bulk of the plant-body is made up of dead cells.

The greater number of the faults enumerated above would be due to the inaccessibility of the botanical literature to the animal physiologist, and are of such nature that they may be easily eliminated from future editions. The book has a long period of usefulness before it. It is stimulating and suggestive, and will do much to broaden investigation upon both the animal and vegetal organism; a purpose it would accomplish equally well under its proper title of 'The Physiology of the Cell.'

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#### GENERAL.

THE last Legislature of the State of Arkansas provided for the printing of the hitherto unpublished reports of Dr. J. C. Branner, formerly State Geologist of that State. There are five volumes of these reports, viz: (1) Coal; (2) Lower Coal Measures; (3) Clays, Kaolins and Bauxites; (4) Zinc and Lead; (5) Report on

the general geology of the State. Provisions were also made for printing new editions of the reports already out.

THE sixth volume of Biological Lectures from the Wood's Holl Laboratory, in the press of Messrs. Ginn & Co., will contain:

- 'The Structure of Protoplasm,' E. B. Wilson.
- 'Cell-Lineage and Ancestral Reminiscence,' E. B. Wilson.
- 'Adaptation in Cleavage,' Frank R. Lillie.
- 'Protoplasmic Movement as a Factor of Differentiation,' Edwin G. Conklin.
- 'Equal and Unequal Cleavage,' A. L. Treadwell.
- 'Cell Origin of the Prototroch,' A. D. Mead.
- 'Relation of the Axis of the Embryo to the First Cleavage Plane,' Cornelia M. Clapp.
- 'Observations on Various Nucleolar Structures of the Cell,' Thomas H. Montgomery, Jr.
- 'Protoplasmic Contractility and Phosphorescence,' S. Watasé.
- 'Some Problems of Regeneration,' T. H. Morgan.
- 'The Elimination of the Unfit,' H. C. Bumpus.
- 'Heredity of Coloration in Fishes,' Jacques Loeb.
- 'Do the Reactions of Lower Animals, Due to Injury, Indicate Pain Sensations,' W. W. Norman.
- 'North American Ruminant-like Animals,' W. B. Scott.
- 'Caspar Friedrich Wolff and the Theoria Generationis,' W. M. Wheeler.
- 'Animal Behavior,' C. O. Whitman.

MM. GEORGES CARRÉ and C. Naud have begun the publication of a series of scientific monographs under the editorial direction of leading French men of science. MM. Appell, Cornu, d'Arsonval, Friedel, Lippmann, Moissan, Poincaré and Potter are responsible for the physical and mathematical sciences and MM. Balbiani, d'Arsonval, Filhol, Fouqué, Gaudry, Guignard, Marey and Milne-Edwards for the biological sciences. The numbers so far issued are as follows: 'Les Oscillations Électriques,' by M. Poincaré; 'La Spécificité Cellulaire,' by M. Bard; 'La Sexualité,' by M. le Dantec.

#### SCIENTIFIC JOURNALS AND ARTICLES.

THE papers in the *American Journal of Science* for May are as follows:

- 'Some Experiments with Endothermic Gases,' by W. G. Mixer.
- 'Hypothesis to explain the partial non-explosive Combination of Explosive Gases and Gaseous Mixtures,' by W. G. Mixer.