

students can do is to verify some of them by means of one or two examples which illustrate them. Nevertheless, the plan of replacing the purely descriptive work in science by something which makes the students think, and makes them test the accuracy of their conclusions by means of new experiments, is greatly to be recommended.

E. H. K.

SCIENTIFIC JOURNALS.

BOTANICAL GAZETTE, JULY.*

Undescribed Plants from Guatemala and other Central American Republics, XV.: JOHN DONNELL SMITH.

For some years Captain Smith has been exploring the regions named and studying collections made there by others, with the result of finding many new plants which are being described (and some handsomely figured) in this series of papers. Many of the descriptions are contributed by European specialists.

Contributions to the embryology of the Ranunculaceæ: DAVID M. MOTTIER.

This paper, which is richly illustrated by 59 figures, brings to our knowledge considerable variation in the development of the embryo sac in different genera of the family. One of the most striking points is in the announcement of the frequent occurrence in this family also of more than one embryo sac in the ovule and the presence of as many as five or more initial cells of embryo sacs in *Caltha*.

Observations on the development of Colletotrichum lindemuthianum in artificial cultures: GEO. F. ATKINSON.

This fungus is the one producing the common spot disease (anthracnose) of beans. Having made many failures in germinating the spores in artificial media, Professor Atkinson finally succeeded and gives a detailed account of his successful

methods in this paper. Photomicrographs reproduced in half-tone show his results.

On the validity of some fossil species of Liriodendron: THEO. HOLM.

Mr. Holm criticises paleobotanists for naming scrappy remains of leaves, and takes to task especially Professor Hollick's determinations of some cretaceous plants from Long Island.

The nomenclature question: (1) *Botanical nomenclature and non-systematists*: W. F. GANONG; (2) *Dr. Robinson and homonyms*: FREDERICK V. COVILLE.

The nomenclature question is attracting a great deal of attention at present among botanists. In the first named contribution to the discussion Professor Ganong opposes the proposed reform, because it violates the psychological principles of the use of language, and because it is not likely to obtain a sufficient following to make its nomenclature intelligible. Mr. Coville points out the advantageous working of the law of the rejection of homonyms in a real case, as opposed to its disadvantageous working in the case supposed in a previous note by Dr. Robinson.

In *Briefer Articles* Mr. M. L. Fernald describes a new dandelion with red fruits (*Taraxacum erythrospermum* Andr.) which has made its appearance in New England; an account is given of the Gilbreth botanical collection recently presented to Radcliffe College; Professor W. A. Kellerman reports an apparently authentic case of poisoning of children by eating shepherd's purse; Mr. C. L. Pollard describes a new variety of the arrow-leaved violet (*Viola sagittata* Hicksii) from the District of Columbia; and Dr. L. M. Underwood figures a curiously deformed Equisetum, presumably *E. hiemale*.

Under *Current Literature* are reviewed Oliver's 'Natural History of Plants,' a translation of Kerner's 'Pflanzenleben';

* Issued July 15, 1895. 56 pp., 3 pl.

Potter's translation of Warming's 'Hand-book of Systematic Botany'; Darwin's 'Elements of Botany'; Lloyd's illustrations of fungi; MacDougal's 'Experimental Plant Physiology'; Bailey's 'Horticulturist's Rule Book'; Comstock's 'Manual for the Study of Insects'; and Dewey's last weed bulletin. In an *Open Letter* Professor Hollick replies on behalf of paleobotanists to Mr. Holmes' criticisms previously referred to. The number closes with four pages of *Notes and News*.

THE PSYCHOLOGICAL REVIEW, JULY.

The Psychology of Pain. By PROFESSOR C. A. STRONG.

In this article the author reviews the evidence as to a sensation of pain, citing many pathological cases. He concludes in favor of pain as a sensation in addition to the unpleasantness which accompanies mental contents. He does not incline, however, to accept the view that sensation-pain has separate nerve fibres of its own.

Experimental Induction of Automatic Processes.

By PROFESSOR W. R. NEWBOLD.

A detailed experimental study of the visual images induced by steady gazing upon a shining surface, called 'crystal vision.' Many new and interesting experiences and variations are reported. The author takes occasion, on the strength of his experiments, to combat the theory of subconscious trains of ideas or 'secondary personalities' to account for these phenomena; holding that they can be explained as complex responses of the lower centres to stimulation.

Sensory Stimulation by Attention. By PROFESSOR J. G. HIBBEN.

Report of a case—a girl who could not hear except when her attention was directed to the source of the sound. The author discusses other cases of a similar kind and the possible grounds on which a reinforcement

might come to the sensory processes from the processes of attention.

Shorter Contributions; Discussions: including a discussion on 'Shadows of Bloodvessels on the Retina,' by MRS. C. LADD FRANKLIN; 'The New Psychology in Undergraduate Work,' by H. K. WOLFE, etc., followed by *Psychological Literature; Notes*.

PSYCHE, AUGUST.

W. T. BLATCHLEY gives notes on 38 of the Heteroptera observed by him while winter collecting in Vigo County, Indiana. Dr. A. Davidson describes the habits of a Californian Stigmus, a wasp which stores its cells with aphides and notices two parasites bred from the larvæ, one of which is here described by Ashmead. C. H. T. Townsend describes the prickly leaf-gall of *Rhodites tumidus* on *Rosa fendleri* in New Mexico. D. W. Coquillett records the occurrence of *Acreotrichus* in Washington (State), a genus of Diptera heretofore known only from Australia, and describes the species. A. P. Morse describes three new species of North American Odonata of the genera *Nehalennia* and *Enallagma*; and Miss C. G. Soule prints some miscellaneous notes on moths. Brief proceedings of the Cambridge Entomological Club follow.

NEW BOOKS.

Elements of Botany. FRANCIS DARWIN. Cambridge, University Press. 1895. Pp. vii+235. \$1.60.

The Science of Mechanics. ERNEST MACH. Translated by Thomas J. McCormack. Chicago, Open Court Publishing Co. 1893. Pp. xiv+534.

Schneekrystalle. G. HELLMAN. Berlin, Rudolf Mückenberger. 1893. Pp. 66. M. 6.

Annual Report of the Geological Survey of Canada, Vol. VI. Ottawa. 1895. Pp. x+212.

Proceedings of the Iowa Academy of Sciences for 1894, Vol. II. Des Moines. 1895. Pp. 222.