SCIENCE

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MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

*THE CULTURAL VALUE OF ENGINEERING EDUCATION.**

AT the very outset of this discussion is encountered a great difficulty. What is culture? The writer has been asking this of his friends. An answer has been sought for in the printed page where is recorded the best thought of the best minds. Great thoughts and lofty ideals have been disclosed, but nowhere has been found a satisfactory definition, a phrase or paragraph that succinctly and clearly sets forth the heart of the matter.

People often recognize, appreciate and reverence its possession without being able to fully analyze and set down its elements. There is something subtile and emotional about it that eludes a close pursuit.

The reason for this perhaps lies in its essential individual quality, in its being the result of a personal life, developed, it is true, on lines similar to those used in other lives, yet including something that pertains exclusively to the human unit that is different from all other units.

Nevertheless, there seem to be certain fundamental qualities which must be possessed before a man can be classed with cultured people, qualities which are only acquired after a considerable experience in

*Address of the President of the Society for the Promotion of Engineering Education, Buffalo meeting, June 29, 1901.

tion and progress of the work, the preparation of which was undertaken in 1890. Financial support has been given by the British Association, the Royal Society and the Zoological Society, while the authorities of the British Museum have afforded continual assistance. The work will be to the student of animal life what the 'Index Kewensis' is to the botanist, and indeed far more, as the last-named work refers only to Phanerogams, whereas the 'Index Animalium' will include all groups of animals and both recent and fossil forms. The portion of the work already completed and in the press covers the period from 1758–1800 and consists of 61,600 entries.

THE Society of German Engineers, in Berlin, has undertaken the preparation of an international technical dictionary to be published in English, French and German.

SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of the Boston Society of Medical Sciences completes its fifth volume with the double number for May 23 and June 4, the index to the volume being issued with this number. From a small 16mo the *Journal* has grown to a volume of over 500 pages, although it shows at the same time the modern tendency towards specialization by containing more bacteriological and pathological papers than formerly. There is, however, much of general interest as well as important contributions to our knowledge of anatomy and physiology.

The Plant World for June contains 'Botanizing in Bermuda,' by Marshall A. Howe; 'Suggestions for the Study of the Hawthorns,' by W. W. Ashe, which notes that in place of ten species formerly recognized we know that at least 120 species occur on the Atlantic coast; 'Cuban Uses of the Royal Palm,' by William Palmer, and 'Botanizing in and around a Lake,' by E. L. Morris, besides briefer articles, notes and reviews. The supplement devoted to 'The Families of Flowering Plants,' by C. L. Pollard,' treats of the Mimosaceæ, Cæsalpiniaceæ, and the Papilionaceæ. The number is well illustrated.

SOCIETIES AND ACADEMIES.

ONONDAGA ACADEMY OF SCIENCE.

AT the June meeting Mr. Chas. G. Rogers presented a series of observations made during March, April and May, on the dates of arrival of birds on their spring migration, the blue-bird being first seen on March 15, and the robin appearing three days later.

Mr. Geo. D. Lynch read a paper on 'Hawks,' in which he described the food, and the nesting and defensive habits of Cooper's hawk, the sparrow hawk and the red-shouldered hawk, illustrating his remarks with specimens of skins and eggs of each of the three species.

Principal John D. Wilson read a paper embracing his observations on a family of bluebirds. He constructed a box in the shape of a prism about six inches square and fifteen inches deep, two opposite sides stopping about two inches short of the top, thus forming two entrances, protected from rain by a projecting roof. A narrow shelf was placed just beneath each entrance. Sparrows seemed unable to utilize the box for nesting purposes and so left it alone. They gathered about, however, when the young birds began to appear at the entrances, but were soon driven away by the parent birds. After the young were hatched they seemed to be fed solely by the mother, who invariably entered and left the nest by the opening on the south side. The male entered either opening indifferently, never brought food, and usually brought out excreta from the nest. Mr. Lynch spoke of similar observations on a robin's nest. The young birds were fed entirely on caterpillars, while the parent birds ate freely of cherries, monopolizing one tree, and even brushing their wings against the head of any person attempting to climb the tree.

Mr. Horace W. Britcher spoke briefly of the habits of some of the forms of life inhabiting a small springtime pond in which a form of the fairy shrimp (*Branchippus gellidus* Hay ?) occurs. The pond is usually dry from July to November. Larval *Branchippus* appear in February, and eggs are deposited during late April and early May, the water becoming so warm by the middle of May that the *Branchippus* are rapidly killed. A year ago eggs were collected and an attempt