

little creatures crowded into such small spaces is a marvel, but it is proof also of the extreme abundance and all-pervading character of the swarm.

The large lamp in the cabin, with a chimney of a capacity of perhaps a gallon, I was told, had been snuffed several times by the crowding insects. On a spread newspaper nearby lay a pile of the insects which had been dumped from the chimney. There were fully enough to have completely filled the chimney—an innumerable mass. From this collection I gathered some specimens for identification. The Chironomids, which were largely in the majority, have been identified by J. R. Malloch as *Chironomous halteralis* Coquillett, *C. modestus* Say, and *Tanytarsus* sp. The Trichoptera identified by Nathan Banks are *Ecetina incerta* Walker, and *Oxyethira dorsalis* Banks. No representatives of other orders were noted.

W. L. MCATEE

ON THE NOMENCLATURE OF ELECTRICAL UNITS

THE present cumbrous method of describing the electrical units in the electrostatic and electromagnetic systems suggests the advisability of the adoption of an abbreviated nomenclature which, while being simple, may be sufficiently descriptive. An attempt in this direction has been made by Messrs. Franklin and MacNutt in their text-book "The Elements of Electricity and Magnetism." In it "ab," the first syllable of the word "absolute," is prefixed to the names of the practical units to designate the corresponding units of the electromagnetic system. It appears to the writer that a similar abbreviation might with advantage be employed in the case of the electrostatic system, and he suggests the use of the prefix "es" for the electrostatic system and, possibly, the use of the prefix "em" instead of "ab" for the electromagnetic system. Thus the elementary charge of electricity would no longer be described as " 4.7×10^{-10} electrostatic units of quantity (or charge)," but as " 4.7×10^{-10} escoulombs." Similarly, the ratio of electronic charge to mass would not be expressed as " 1.7×10^7 electromagnetic units of

quantity (or charge) per gram," but as " 1.7×10^7 emcoulombs per gram." Certain written abbreviations naturally follow, thus: esc = escoulomb, emc = emcoulomb, esa = es-ampere, and so on. This system of nomenclature may be extended to the so-called "rational systems" by using "res" instead of "es" and "rem" instead of "em."

It is hoped that the use of some abbreviated system of nomenclature may become common, and the foregoing is offered as a possible contribution toward that end.

A. E. CASWELL

UNIVERSITY OF OREGON,
October 14, 1915

COOPERATION IN LABELLING MUSEUMS

THE Parks Branch of the Department of the Interior of Canada published thirty duplicates of the larger labels of those making up its Handbook of the Rocky Mountains Park Museum. This was done with the intention of offering them through the Museum of the Geological Survey, Ottawa, Canada, to the thirty then known museums in Canada. The survey offered the labels to the museums. Seventeen of them requested certain of the labels and were supplied, being given to understand that these labels were for use only until better labels were available. It is intended to publish from time to time a revised and more complete handbook and to print separates of a larger number of the labels composing it. An edition of at least sixty duplicates will then be desirable, as there are now known to be that many museums, counting both large and small, in Canada.

The writing of the labels and the typesetting of the first edition has already served twenty-two purposes, namely, to produce the handbook of the museum, to partly label the Rocky Mountains Park Museum, to place labels referring to the museum, zoo, paddock and park in the railway station and hotels at Banff, to label some of the animals in the zoo of the park, to label all the local animals in the paddock of the park and to assist in labelling seventeen other Canadian museums. There is a daily prospect of having requests for such

assistance from still other of the sixty Canadian museums.

HARLAN I. SMITH

DR. EDWARD HINDLE

TO THE EDITOR OF SCIENCE: In a review of Dr. Edward Hindle's book on "Flies in Relation to Disease—Bloodsucking Flies," by Mr. W. D. Hunter, printed in the issue of SCIENCE for July 16, there occurs the erroneous statement that Dr. E. Hindle met his death in Africa. Dr. Hindle is alive and well and occupies the position of divisional signal officer with the rank of first lieutenant in the Royal Engineers. He is expecting to leave for the front at any moment. It is clear to me that confusion has arisen through the death of Mr. Gordon Merriman, who likewise belonged to my laboratory staff. Mr. Merriman was killed while fighting in Nyasaland. Dr. Hindle has never been in Africa, although before the war we planned for him to go there on a scientific expedition.

Having received many inquiries, from different parts of the world, owing to the misstatement in SCIENCE, I shall be much indebted to you if you will kindly help me to quiet the apprehensions of Dr. Hindle's numerous friends by correcting the error referred to.

G. H. F. NUTTALL

CAMBRIDGE,
October 10, 1915

SCIENTIFIC BOOKS

Bodily Changes in Pain, Hunger, Fear and Rage; An Account of Recent Researches into the Function of Emotional Excitement. By WALTER B. CANNON. New York, D. Appleton & Co., 1915. Pp. xiii + 311.

The Origin and Nature of the Emotions, Miscellaneous Papers. By GEORGE W. CRILE. Edited by AMY F. ROWLAND. Philadelphia, W. B. Saunders Co., 1915. Pp. vii + 240.

It is not altogether an accident that these two volumes, covering ground in many respects very similar, should appear at the same time. For a number of years, and particularly since the publication of Pavlov's work on the effects of emotion upon glandular action, there has been a wide and increasing interest among psy-

chologists and physiologists in the more intimate bodily mechanism underlying emotional processes. This movement has coincided with a rapidly growing appreciation among physiologists and physicians of the organic significance of certain of the so-called ductless glands, and of the physiological importance of gland and muscle tissue in general. Already the discoveries made have quite revolutionized many of the ideas of a generation ago, and the chapter seems hardly more than begun.

Despite the similarity of the two books, it will be convenient to discuss them separately, and we may first consider Dr. Cannon's work, which represents a series of researches carried on by the author in collaboration with a number of his colleagues to whom the book is dedicated. The work gives every internal evidence of having been done with great care and intelligence. The technique pursued is adequately described; the dangers and limitations to which it is exposed are frankly recognized, and the inferences and generalizations proposed are thoughtful and on the whole conservative. The only strictures which a psychologist might be tempted to pass would relate to the large psychological literature on the organic accompaniments of affective states, which is to all intents and purposes wholly disregarded. This may be because it was thought to have no bearing, but to the reviewer this position would hardly seem tenable. In any event, Dr. Cannon's work is written in a manner to inspire the highest respect for its conclusions, whether one wholly agree with them or not.

The essential positions of the author may be summarized in a few propositions, which nevertheless represent very extensive experimentation both of his own and of other scientists. The great divisions of the autonomic system, *i. e.*, cranial, sympathetic and sacral, represent three largely distinct functions in the economy of the organism. The first has to do with the storing up of reserves of energy for times of need, as is represented in the slowing of the heart beat under stimulation of the cranial connections of the vagus. The second is the great defensive organ through whose activity these reserves are rushed to the front