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 psychologists 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