

## THE TEACHING OF ELEMENTARY DYNAMICS

TO THE EDITOR OF SCIENCE: Will you please note that the following typographical errors should be corrected in my article in SCIENCE of December 24, page 901:

First column, after (4) "Impulse = Momentum" should be raised two lines, and "From (3)" should be brought down to the line containing  $T = 2S/V$ .

After (5) "Work done = Kinetic energy" should likewise be raised and "In (4) let" lowered.

Sixth line from bottom, for  $A = M/F$  read  $A = F/M$ .

Second column, third line, for  $Wg/32.1740$  read  $Wg/32.1740$ .

WM. KENT

MONTCLAIR, N. J.

## SCIENTIFIC BOOKS

*Medical and Veterinary Entomology: A Text-book for use in Schools and Colleges, as well as a Handbook for the use of Physicians, Veterinarians and Public Health Officials.* By WILLIAM B. HERMS, Associate Professor of Parasitology in the University of California. The Macmillan Company, 1915. Price \$4.00.

This is a time in the history of the world when "long-felt wants" are rapidly being filled. A year ago an up-to-date handbook of medical entomology did not exist in printed form, and now we have two excellent works on this subject. The first to appear, "A Handbook of Medical Entomology," by Dr. W. A. Riley and Dr. O. A. Johannsen, of Cornell University, was reviewed in SCIENCE, October 15, 1915. The second, which has just appeared, is a large, well-illustrated and competent book of about four hundred pages, and has been written by a man who has been investigating and teaching the general subject for six years or more at Berkeley. Much of the matter contained in the book was prepared for the press some six years ago, but owing to the very many advances which are constantly being made in the field covered by the book it was withheld until this time, much revised and added to, and now appears at a

moment when it is very welcome. Although the author states that his book is not intended to be a comprehensive treatise, but is rather an attempt to systematize the subject and to assist in securing for it a place among the applied biological sciences, it has greatly the appearance of comprehensiveness. The whole field is included in the treatment, and of course for the purposes of the volume the ticks and mites are among the subjects treated. There is also a chapter on venomous insects and Arachnids.

A thoroughly good compilation arranged in a natural and systematic manner would have been a most useful book for the teacher and student as well as the practitioner, but in addition to being such a compilation this book includes a large amount of new material based upon the researches of Professor Herms and his assistants. For example, he details specific experiments in the transmission of bacteria by cockroaches and gives counts of the bacteria of the different parts of the body of the croton bug. His chapters on organization and cost of mosquito control work and on organization and control work against the house fly are especially strong from the very fact that they are based upon extended experience and upon very many experiments. Professor Herms himself has been the adviser in nearly all of the organization and control work of this kind which has been carried out on the Pacific coast, and what he says in this direction is in the highest degree authoritative. His chapter on the stable fly (*Stomoxys calcitrans*) is also strong, and his conclusion to the effect that it is doubtful that this species is the usual agent in spreading polyomyelitis in nature is based upon a careful series of experimental laboratory work with this species and monkeys. The treatment of the important group of fleas and ticks is noticeably full, and his consideration of bee stings, and especially of the morphology and operation of the sting, is very welcome.

In his generalizations concerning mosquito life history, on page 91 and the following, he does not sufficiently point out, it seems to the writer, the enormous differences that exist in the life histories of different species, which