

ing among psychologists; and, also, if I ascribed to physicists generally some knowledge of the Hering hypothesis. It would, perhaps, have been a more nearly accurate statement to say that most, if not all, of the physicists who are acquainted with Hering's hypothesis reject it. My own acquaintance with the outlines of this hypothesis began sixteen years ago; but Professor Titchener is entirely correct in the conclusion that I have not 'followed up the Hering theory in its meanderings through a large number of scattered journals, some of which are now not at all easy to procure.' I do not consider this remark at all 'blunt,' nor is there anything in Professor Titchener's paper that calls for excuse. I may, however, regretfully remark that, in common with others of my profession, I shall hardly have the opportunity to look up these journals. When a psychologist of recognized authority informs me that 'there are now only two discussable theories of color vision, those of Helmholtz and of Hering,' I am willing and glad to accept his judgment, and to let the rest go with but little attention.

The conflict between these two hypotheses will, therefore, be watched in future years with the calm interest of an outsider, rather than that of a partisan. In teaching that portion of optics which relates to color I shall carefully limit myself to the physical facts; and if Hering's hypothesis should win its spurs, and thus be changed into Hering's theory, the physicists will doubtless forget their ancient hardness of heart and will welcome the settlement of a long vexed question.

Apart from Professor Titchener's discussion, several private communications have brought the assurance that my criticism of the color hypothesis which has for many years held a place in my regular course of instruction has had more than one sympathetic reader. The good spirit which has characterized the reception of my paper is a source of gratification.

W. LE CONTE STEVENS.

THE GEOLOGICAL AND BIOLOGICAL SURVEYS OF ALABAMA.

TO THE EDITOR OF SCIENCE: In his Presidential address, published in SCIENCE, April

29th, Professor V. M. Spalding credits the Biological Survey of Alabama with the botanical work of Dr. Charles Mohr, of Mobile. That Survey is doing most excellent work, but Dr. Mohr has for many years been engaged, under the auspices of the *State Geological Survey*, in the investigation of the Botany of Alabama. As one of the results of this work we have now going through the press a complete flora of the State, and this will be followed by a companion volume in which the useful and noxious plants will be treated in a very thorough manner, as all who know the character of the work of Dr. Mohr will be ready to believe.

The Geological Survey began this work many years before the Biological Survey was inaugurated.

EUGENE A. SMITH.

UNIVERSITY OF ALABAMA, May 6, 1898.

SCIENTIFIC LITERATURE.

An Elementary Course of Infinitesimal Calculus.

By HORACE LAMB, M.A., F.R.S., Professor of Mathematics in the Owens College, Victoria University, Manchester; formerly Fellow of Trinity College, Cambridge. Cambridge, University Press. 1897. Crown 8vo. Pp. xx + 616.

The English text-books on the Infinitesimal Calculus in common use afford a formal treatment of the calculus that is all that can be desired. A student who has worked all the examples under important topics in one of these books has been through a course of shop-work that prepares him adequately for the manipulation of calculus formulas—and for the tripos examination. But he has done only shop-work. He has learned to differentiate explicit functions and to integrate (some) explicit functions, and to prove all sorts of things by Taylor's Series. He has *not* been trained to examine carefully the reasoning he employs or to consider even the broadest limitations in the statement of theorems. Teachers of elementary calculus are only too prone to leave the consideration of all such matters to the indefinite future; but a wise system of instruction will strive not to hide from the student, but to point out to him those difficulties that are inherent in the fundamental