

to research. He, at the invitation of the Ceylon government, investigated the disease which about the year 1880 devastated the coffee plantations of Ceylon. His account of the life-history of *Hemileia vastatrix*, the fungus which immediately caused the disease, while contributing many new morphological and physiological facts, was especially valuable by reason of the scientific basis it established by which the method of the treatment of the disease that might be adopted should be founded. In 1889 he contributed a paper to the Royal Society 'On the tubercles in the roots of leguminous plants, with special reference to the pea and the bean.' In the following year, 1890, he was selected to deliver the Croomian lecture before the Royal Society, and selected as his subject 'The Relations between Host and Parasite in certain Epidemic Diseases of Plants.' In 1891 his paper on 'The Ginger-beer Plant and the Organisms composing it, a Contribution to the Study of Fermentation Yeasts and Bacteria,' attracted much attention, and was described by Lord Kelvin as a model of experimental biological investigation. In 1892 he contributed an important paper, entitled 'Experiments on the Action of Light on Bacillus Anthracis.' A further paper on the same subject was written by him, and later, in conjunction with Mr. P. F. Frankland, he contributed to the second report of the Water Research Committee of the Royal Society a paper entitled 'The Vitality and Virulence of Bacillus Anthracis and its Spores in Potable Water.' In 1893 the Royal Society recognized his great merit as an investigator by awarding him a Royal medal, and the President of the Society (Lord Kelvin) especially alluded to Prof. Ward's contribution on the action of light in arresting the development of and killing bacteria as having brought out striking results, the significance of which, from a sanitary point

of view, was sufficiently apparent, and, further, had led to other investigations by Prof. Ward into the wide question of the function of color in the vegetable kingdom. These further investigations were communicated to the Society in 1894 and form a part of the third report of the Water Research Committee. It may be mentioned that the value of the professorship is £700 a year, and it is tenable for life, subject to certain regulations as to residence and delivery of courses of lectures.

At the meeting of the University Court of Glasgow University, according to *The Lancet*, a letter was received from Mr. C. W. Mitchell, who quotes from a letter to Sir W. Geddes, written by the late Dr. Mitchell, who said: "Lord Huntly, I believe, is endeavoring to raise a special fund of £20,000, and if £6000 of that amount can be collected soon I would be prepared to contribute an additional £4000; further, if his lordship can increase his collection in £10,000 I will increase my subscription to £6000, thus making up the required £16,000 without appeal to the Government." "I now beg to confirm this offer," writes Mr. Mitchell, "subject to the consideration that your lordship's £6000 is collected by January 1, 1896, and the additional \$4000 by May 1st."

MR. JAMES WILSON, lecturer in agriculture at the University College of Wales, has been appointed to a similar lectureship in Glasgow University.

DR. OSTMANN, of Königsberg, has been appointed extraordinary professor of otology in succession to Professor Barth, who goes to Breslau.

DISCUSSION AND CORRESPONDENCE.

EXPERIMENTAL PSYCHOLOGY IN AMERICA.

TO THE EDITOR OF SCIENCE: I think my Journal, where the misunderstood words appeared, and where their context could be seen, should have had a chance to print the well concerted

quartet of letters in your issue of November 8. I see no ground for invoking the larger public of SCIENCE. Accepting, however, the change of *venue*, permit me to say, first, I never dreamed of disparaging a rival journal, or of implying in the remotest way either that mine was or even that the *Review* was not an *Archiv*. The reference was solely to the twice-considered plan of dropping all reviews, notes, etc., from the Journal and printing only researches as long, perhaps, as those lately printed separately by Profs. Cattell, Fullerton, Nichols, Brandt, etc.

Still less, if possible, did I dream of making or implying any claim so preposterous as that I or the Journal had 'accomplished nearly everything' 'for the advancement of psychology in America.' In the development of a new academic 'department' a crucial point is, as I deem it, when an instructor is appointed whose central work and interest is in that line. Such a point, I think, was marked both at the University of Pennsylvania and at Columbia by Prof. Cattell's appointment; at Wisconsin by Prof. Jastrow's; at Toronto by Dr. Kirschmann's; at Harvard by Dr. Nichols'; at Yale by Dr. Scripture's, and long ago at Johns Hopkins by my own. This, and this alone, was my theme. Had it been of the pioneer work, no less crucial, which made these appointments possible, which was done by Profs. James, Ladd, and earlier by President McCosh and others, I should not only have desired to say nearly all they have said, but more. To Prof. James, especially, I owe a debt I can never repay, unless by trying to influence him to correct the views in which we more and more widely differ, some of which he will bear me witness I have earnestly tried to do.

I am very sorry the name of Toronto got on the list of laboratories affected by our work. It is a mistake I cannot account for, and I am glad to correct the error with due apologies to all aggrieved thereby. The difference too between the wording of the relation between the assistant editors and myself, Dr. Sanford desires me to state, was his regrettable mistake, and will be corrected, according to the original announcement, in the next number.

As to the comparative influence of Yale and Clark upon men who have attended both, I

prefer to yield all claims rather than divide the child; so I do as to Dr. Scripture, and also as to the size of my 'influence' at Princeton. As Socrates said of the disputations of the sophist Euthydemus, I would rather be refuted by such arguments than to use them.

For one, I sincerely hope that in this transition period the psychological atmosphere will not become too tense for a spirit of hearty coöperation, or too lax for healthful or virile competition.

G. STANLEY HALL.

CLARK UNIVERSITY, November 18, 1895.

THE BREHM CUTS AGAIN.

TO THE EDITOR OF SCIENCE: Referring to SCIENCE of April 5, 1895, p. 387, and June 21, p. 682, I beg to say that my original charge of libel against Dr. C. H. Merriam, for using the term 'piracy' in connection with the appearance of the Brehm cuts in the *Standard Natural History*, is not in the least affected by what appears in SCIENCE of October 25, 1895, p. 648. I believe the latter to be substantially correct; but it relates to an entirely different matter, viz.: action brought to recover damages for alleged breach of contract concerning resale of Brehm cuts and their subsequent use in other connections than the *Standard Natural History*. The case will be found fully and no doubt fairly stated in the Publishers' Weekly of October 26, 1895, p. 716; but it is one that I never raised, and know nothing about—only that it has nothing to do with the point I made; and I should not now bring it up again, except to correct a very possible misapprehension on the part of some who may be misled into the belief that my original charge does not remain in full force.

ELLIOTT COUES.

WASHINGTON, D. C., November 17, 1895.

QUATERNIONS.

EDITOR OF SCIENCE:—The communication in a recent issue of SCIENCE in reference to the formation of an International Society for the purpose of advancing the study of Quaternions is one of great significance to the friends of the subject in this country. The time is certainly fitting for the organization of such a society and