have been limited to equatorial Africa and certainly it had not reached prior to 1906 or 1907 the cultivated district of the Nile Valley where cotton has been a commercial crop of importance for at least a hundred years. This point of view is now held by the experts who have studied this insect in Africa and India such as Willcocks, Fletcher and Ballou.

C. L. MARLATT

HARRY KIRKE WOLFE

PROFESSOR HARRY KIRKE WOLFE, head of the department of philosophy in the University of Nebraska, died suddenly on July 30 last at Wheatland, Wyoming, whither he had gone for a brief outing. Dr. Wolfe was born in Illinois, in 1858, but he was a Nebraskan by rearing and he received his collegiate education In the state university. In 1883 he went to Berlin to carry further the study of the classics, which was then his interest, but while in Germany he was won to psychology, and changing to Leipzig became one of the group of young Americans who had been attracted by the fame of Wilhelm Wundt, and who were to revolutionize the teaching of the science upon their return to America. Dr. Wolfe was in the vanguard of this movement. He received his doctorate in 1886, and in 1889 he was made professor of philosophy in his alma mater, where previously this field had been the prerogative of the college head. Immediately he began to build up the physiological and psychophysical foundations of his subject, creating the first laboratories in psychology open to undergraduates in the country-a feature of the instruction which to the end was distinctive of his work. From 1889 to 1897 Dr. Wolfe's work was attended with a truly phenomenal success, not only in the immediate strength of his department but also in its influence, for he started not a few young men toward the adanced cultivation of his science-among them Professors Pillsbury of Michigan and Bentley of Illinois-as well as of the broader field of philosophy. It was in this period, too, that he published a number of monographic articles in psychophysics (out of a great series planned), and he was connected with the appearance of the American Journal of Psychology. IInhappily the career thus splendidly begun was interrupted by one of those accesses of bigotry which sometimes seize college authorities; and under absurd political and religious charges he was asked to resign in 1897. In the period from 1897 until 1905 Dr. Wolfe was engaged in public school work, with the result that his interest in secondary education became the predominant one for the remainder of his life. In 1905 he was called to the University of Montana, and two years later back to the University of Nebraska, where again he became head of the department which years before he had founded. This position he held until his death. In this latter period. while his old interest in experimental psychology was as keen as ever, it had constantly the bias of the secondary school needs in mind. and his laboratories became the training grounds for scores of young men and women who were to enter the public school field. Certainly there are few, if any, teachers in the middle west who have so profoundly and beneficially influenced the later development of its secondary education.

Such in brief is the outward career of a man whom all who knew him knew to be possessed of a genius for teaching. There are few qualities which the teacher should possess which he did not own in exalted measure: keenness and kindness, unfailing humor and patience and generosity of soul, and the power to inspire, all these were his; and he was loved by those under his influence as few men are loved. It is an irony-perhaps attaching to his quiet yet steadfast personality, for he was above all a man of principle-that such a man should twice in his career have come under the charges of malicious ignorance. The first occasion was in 1897. Ten years later, when he was returned to his old position his vindication came (as it was bound to come), though meantime the character of his life work had been once for all altered. The second occasion was in June of 1918, when through idle gossip his name was dragged before the inquest into loyalty forced upon the university by the State Council of Defense. He was, of course, immediately vindicated; but the cruel fact of the charge was a hurt which—humorously as he passed it off—made the more precarious the heart trouble from which he suffered, and led quickly to the end. Dr. Wolfe was one of the few men to whom, in action and motive and principle, the word "noble" can be clearly applied. He was a lover of truth and righteousness, of his country and of humanity, and of the best in all things worthy of the name of philosopher.

HARTLEY B. ALEXANDER

UNIVERSITY OF NEBRASKA,

September, 1918

SCIENTIFIC EVENTS

THE DEVELOPMENT OF THE DYESTUFFS IN-DUSTRY

THE success of the American chemists and chemical manufacturers in developing the dyestuffs industry, when the supplies of dyes from Germany were cut off, is shown in a report issued by the United States Tariff Commission, entitled "Census of Dyes and Coal-tar Chemicals, 1917."

At the outbreak of the European war, Germany dominated the world's trade in dyes and drugs derived from coal tar. Before the war, seven American firms manufactured dyes from imported German materials. In 1917, 190 American concerns were engaged in the manufacture of dyes, drugs and other chemicals derived from coal tar, and of this number 81 firms produced coal-tar dyes from American materials which were approximately equivalent in total weight to the annual imports before the war. The total output of the 190 firms, exclusive of those engaged in the manufacture of explosives and synthetic resins, was over 54,000,000 pounds with a value of about \$69,-000,000.

Large amounts of the staple dyes for which there is a great demand are now being manufactured in the United States. A few of the important dyes, such as the vat dyes derived from alizarin, anthracene and carbazol, are still not made. The needs of the wool industry are being more satisfactorily met than the needs of the cotton industry.

The report gives in detail the names of the

manufacturers of each dye or other product and the quantity and value of each product, except in cases where the number of producers is so small that the operations of individual firms would be disclosed. Seventeen hundred and thirty-three chemists or engineers were engaged in research and chemical control of this new industry, or 8.8 per cent. of the total of 19,643 employees. The report also contains an interesting account of the history and development of the industry since the outbreak of the European war.

On August 27, Dr. H. O. Forster, a member and director of the Technical Committee of British Dyes, Limited, lectured on August 27 on "The decay and renaissance of British dye making" at the British Scientific Products Exhibition, King's College. He stated that in 1878 the color industry in Germany was four times as valuable as that of England. Of £3,150,000 worth of coal tar colors produced in the world Germany produced £2,000,-000, four fifths of which was exported, while Switzerland produced £350,000, and England only £450,000 worth.

That was forty years ago; confronted by these figures, people would hesitate to believe those who said that in two or three years England should be able to do all that Germany could in regard to the dye industry. It would take ten or fifteen years of unremitting labor and extraordinary patience and liberal expenditure on chemistry before we could hope to achieve the position which Germany had reached before the war in this industry. He said in conclusion:

They have three times as many chemists as we have, and their population is half as large again. We shall have to make a great effort if we are going to reach them. The industry is not an El Dorado in which one has to dig once in order to make countless thousands. It can only be achieved if money is spent on experiment. That was how Germany got on, and unless we tread the thorny path the Germans have followed, there is not the slightest hope of our catching them up in this industry. They will keep it for all time.

On the conditions of success in England Sir Henry Armstrong writes to the London *Times*: