

zoology in the University of South Carolina, and in 1889 became professor of biology and botany in the Alabama Polytechnic Institute. While at the latter institution he published as a bulletin of the Alabama Agricultural Experiment Station perhaps his best known zoological paper on the root-gall nematode, *Heterodera radicicola*. His interests shifted rapidly, however, to the fields of plant pathology and mycology, and in 1892 he returned to his alma mater to accept the position of assistant professor of botany. He became associate professor in 1893, and at the death of Professor Prentiss in 1896 became head of the department.

During the last twenty-five years of his life, though burdened with the multitudinous duties of teaching and administration, he found time to devote himself to research in various fields of botany. He labored untiringly and published over one hundred and fifty papers concerning his investigations. These reveal an unusually wide range of interests. He was also the author of extensively used text books including, "The Biology of Ferns," "Elementary Botany," "A College Text Book of Botany" and "Mushrooms Edible, Poisonous, etc." He rapidly attained an eminent position among the botanists of the world, and received many honors. He was the first president of the American Botanical Society, and throughout his life took an active part in numerous other scientific organizations. His high standing as a scientist was given formal recognition when in 1918 he was elected a member of the National Academy of Science. He served as a delegate to the International Botanical Congresses of 1905 and 1910 held in Vienna and Brussels respectively, and at these meetings used his influence to obtain legislation making for greater stability and uniformity in botanical nomenclature. He traveled in various countries of Europe studying in the field the fleshy fungi of the different regions, and making the acquaintance of an extensive circle of his European colleagues. He was widely known in other lands as a prominent American student of the fungi.

Although his interests covered many fields of botany his highest attainments were

realized in mycology. He was undoubtedly one of the foremost students of the fleshy Basidiomycetes which America has produced. Through years of enthusiastic collecting and study he had acquired a herbarium of specimens and a wealth of photographs and notes which gave him a thoroughly comprehensive grasp of this field. Had he lived to complete the extensive illustrated monograph of this group which he had in process of preparation it would have far surpassed in thoroughness and scope any similar paper on these fungi which has yet appeared in any language. His inability to do so will always remain a source of great regret to his students, and constitutes a very distinct loss to the science of mycology.

In the field of general mycology Professor Atkinson was especially interested in questions of phylogeny. Any newly discovered fungus which promised to supply a transition form from one group to another gained his immediate interest. This interest in phylogeny found expression in his comprehensive papers on the origin of the Phycomycetes and Ascomycetes, and is also reflected in the numerous papers which he and his students published on the ontogeny of the fruit-body in many members of the Agaricaceæ and related groups. The unusual keenness of his reasoning powers and the richness of the fund of knowledge from which he drew his conclusions are revealed in some of the philosophical discussions in these papers. His marvelously retentive memory was at once the admiration and the despair of his students.

He was a man of firm convictions, resolute in setting for himself the highest standards of scientific excellence, and impatient of mediocrity in others. His untiring devotion to his work will long remain an inspiration to those whose fortune it was to know him intimately as teacher or friend. HARRY M. FITZPATRICK

SCIENTIFIC EVENTS

THE GERMS OF INFLUENZA AND YELLOW FEVER¹

MAJOR H. GRAEME GIBSON, R. A. M. C., who died recently at Abbéville, was a martyr to

¹ From the London *Times*.

science and almost at the hour when, in company with two other workers, Major Bowman, Canadian Army Medical Corps and Captain Conner, Australian Army Medical Corps, he had completed the discovery of what is very probably indeed the causative germ of this influenza epidemic.

A preliminary note regarding this germ was published by these doctors on December 14, 1918, in the *British Medical Journal*, and thus Major Graeme Gibson's work takes precedence over later publications. At the time, however, the proof of the discovery was not complete. It has now been completed, as we understand; and Major Gibson's death furnishes a part of the evidence. His eagerness and enthusiasm led him to work so hard that he finally fell a victim to the very virulent strains of the germ with which he was experimenting. He himself caught the influenza, and pneumonia followed.

The germ belongs to the order of filter-passers and is grown by the Noguchi method. It is reported that monkeys have been infected with it quite easily, and have developed attacks producing small hemorrhages in the lungs a soil quite suitable for the reception of the pneumococcus. The chain of evidence thus seems to be very strong. Further, we understand that the germ closely resembles that described by Captain Wilson in the *British Medical Journal* a few weeks ago. Thus Captain Wilson's work seems to confirm the work of Major Graeme Gibson and his colleagues.

It is interesting to note that this work, which has had such fatal consequences for one of the party, has been conducted by three Army doctors, a member of the British forces, a member of the Canadian, and a member of the Australian. The directors of the Medical Service in France deserve the greatest credit, we learn, for the splendid support they have given these workers, while the Medical Research Committee, working with the Army authorities, has rendered invaluable help.

Attention has been so firmly fixed in these last months upon influenza that an interesting event in the medical world has more or less

escaped attention. This is the description by Professor Noguchi of a new germ in connection with yellow fever.

That disease has for long furnished a subject of discussion, because doubt existed as to its exact causation. Dr. Noguchi states that the organism discovered by him belongs to the class known as spirochetes, of which the spirochete of syphilis and that of relapsing fever are other members.

If the discovery is confirmed it will add another link to the wonderful chain of discoveries forged in connection with this disease. The fever was first described in Barbados in 1647. Its dreadful virulence soon earned it its evil reputation, and this virulence became a matter of world-wide concern when in the so-called "great period" of the fever it visited Cadiz in five epidemics, Malaga, Lisbon, Seville, Barcelona, Palma, Gibraltar and other European towns. At Lisbon in 1857 some 6,000 persons died in a few weeks.

The fever remained a mystery up till about 1881, when Dr. Charles Finlay, of Havana, propounded the idea that mosquitoes carried the infection. The view found small support at first, but later Ross's work on malaria re-awakened interest in it. Then came the Spanish-American war and the appointment of a commission by the American government to investigate Finley's theory. The workers nominated were Walter Reed, James Carroll, A. Agramonte, and Lazear. They began by collecting the suspected mosquitoes, allowing them to feed on yellow fever patients, and then submitting themselves to the bites. Their labors were crowned with immediate success, though lives of great value were heroically sacrificed. It was proved that the mosquito *Stegomyia fasciata* is the agent of infection, that the virus of the disease is present in the blood during the first days of infection, and that "the germ is so small that it can pass through a Chamberland filter." Infection could not be produced till after several days from the time when the mosquito had bitten the yellow fever patient, so that it was evident that the germ underwent some change in the body of its insect host.

This work furnished the material of the wonderful campaign by which Gorgas cleansed the Panama Canal zone of yellow fever, and so made possible the completion of that work. Gorgas came to Panama from Havana, which he had also cleansed of yellow fever in about a year, though the place was a famous hot-bed of the disease. His method was to attack the mosquito in its breeding places and to exclude it as far as possible from contact with fever cases.

Dr. Noguchi's work on filter-passing germs is well known. It is also well known that from time to time the suggestion has been offered that the spirochetes pass through two stages of development, one of these stages being of an extremely minute type. Whether or not this view will receive confirmation through the new discovery remains to be seen. In all matters bacteriological it is necessary to keep an open mind until proof of an absolute kind has been forthcoming.

LECTURES BY PROFESSOR BLARINGHEM

DR. LOUIS BLARINGHEM, professor of agricultural biology at the Sorbonne, and exchange professor at Harvard University for 1918-19, is giving a series of ten lectures in French, beginning on Tuesday, April 15, on "The condition and future of agriculture in France." The lectures will be given in Emerson Hall, on Tuesday and Friday afternoons at 4.30 o'clock. They will be open to the public. The dates and titles are as follows:

Avril 15. Le sol français; variétés des terrains et climats. Crûs.

Avril 18. Grandes cultures: blé, betteraves, pommes de terre, lin.

Avril 22. Prés et bois; amélioration des pâturages; plantation des dunes et des territoires dévastés.

Avril 25. Arbres fruitiers; vignes; volailles. Qualités et débouchés.

Avril 29. Cultures forcées; serres et abris vitrés. Production des fleurs.

Mai 6. La science française et l'agriculture. Engrais chimiques.

Mai 9. La lutte contre les maladies du bétail et des produits fermentés.

Mai 13. La production de nouvelles variétés par des sociétés industrielles.

Mai 16. Le paysan français producteur de crûs. Son éducation, ses aptitudes et ses besoins. Rôle de la fermière.

Mai 20. Avenir et renaissance de l'agriculture française. Emploi des machines. Développement des moyens de transport.

NATIONAL RESEARCH COUNCIL

MEMBERS of the Division of Chemistry and Chemical Technology have been nominated as follows:

By the *American Chemical Society*: C. L. Alsberg, Bureau of Chemistry, Department of Agriculture, Washington, D. C.; W. D. Bancroft, National Research Council, Washington, D. C.; C. G. Derick, National Aniline & Chemical Co., Inc., Buffalo, N. Y.; J. M. Francis, Parke Davis & Co., Detroit, Mich.; E. C. Franklin, Leland Stanford Jr. University, Stanford University, Cal.; W. F. Hillebrand, Bureau of Standards, Washington, D. C.; John Johnston, Yale University, New Haven, Conn.; Julius Stieglitz, University of Chicago, Chicago, Ill.; J. E. Teeple, 50 East 41st St., New York, N. Y.

By the *American Electrochemical Society*: Colin G. Fink, 20 2nd St. and 10th Ave., New York, N. Y.

By the *American Institute of Chemical Engineers*: Hugh K. Moore, Research Laboratory, Brown Co., Berlin, N. H.

By the *American Ceramic Society*: Albert V. Bleining, Bureau of Standards, Pittsburgh, Pa.

By the *Division*: C. H. Herty, 35 East 41st St., New York, N. Y.; G. A. Hulett, Princeton University, Princeton, N. J.; A. B. Lamb, Harvard University, Cambridge, Mass.; A. A. Noyes, Massachusetts Institute of Technology, Cambridge, Mass.; C. L. Parsons, Bureau of Mines, Washington, D. C.; E. W. Washburn, University of Illinois, Urbana, Ill.

THE AMERICAN SOCIETY OF MAMMALOGISTS

THE American Society of Mammalogists held its organization meeting in the New National Museum, Washington, D. C., April 3 and 4, 1919, with a charter membership of over two hundred and fifty, of whom sixty were in attendance at the meeting. The following officers were elected: C. Hart Merriam, president; E. W. Nelson, first vice-president; Wilfred H. Osgood, second vice-president; H. H. Lane, recording secretary; Hartley H. T. Jackson, corresponding secretary, and Walter P. Taylor,