him above the common herd, and by which he set a marker in the flow of time. It was his religion. To it he brought conscientiousness, logic, imagination, ingenuity and a background of reading and wide knowledge of what had been done and thought and erred. The diversity of his interests is illustrated by the subjects that come to my mind. In the pre-Cleveland days: color vision, electrophysiology, cardiac nerves, circulation time estimations by the dye method; in the first Cleveland period: otoliths, muscle proteins, electric conductivity and its application to the circulation time, permeability of the blood corpuscles as simple forms of life; in the Chicago period: resuscitability of the central nervous system; in the Cushing Laboratory: further studies of permeability, calorimetric measurements of blood flow, epinephrine output, suprarenal deficiency. All these show careful work and diligent accumulation of data. It is too early to judge their ultimate usefulness.

After all, however, the greatest significance of Stewart is his influence on his students, his pupils and his associates. They are all different, and better, for having been exposed to him, his high standards, his meticulous methods, his comprehensive points of view, his critical logic. I had the privilege of being the first in time; most of his other Cleveland pupils went into practice, except Guthrie, who followed him to Chicago. There his chief disciples were Carlson and Pike, and many others were partly formed by him. In the Cushing Laboratory he became associated with Marine and Rogoff and Dominguez.

To attempt once more a final evaluation, Stewart stands forth as a notable scientist of high ideals and eminent ability. His importance was not so much in his discoveries as in the standards which he inculcated. He promoted physiology as a whole. His teaching set a model of logical exposition, of clear thinking, of critical evaluation of data. He expanded the capabilities of the laboratory in the teaching of physiology. He hastened the appreciation of the experimental point of view in teaching and thinking. All who came in any contact with him were the better for the experience—which is perhaps the highest praise that can be given to any man.

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SCIENTIFIC EVENTS

THE DEPARTMENT OF ANIMAL GENETICS AT THE UNIVERSITY OF EDINBURGH

THE *British Medical Journal* reports the opening of the new department of animal genetics of the University of Edinburgh on June 30 by Sir Edward Sharpey-Schafer, F.R.S., under the presidency of Principal Sir Thomas Holland. Sir Edward Sharpey-Schafer, before declaring the buildings open, gave an address. Professor F. A. E. Crew, in presenting Sir Edward with a key to perform the opening ceremony, referred to the important work of Professor Cossar Ewart, who, he said, was fortunately present that day. Professor Ewart might well regard this department as his own creation and the realization of his dreams. The ceremony also included the conferment of the honorary degree of LL.D. upon Mr. Thomas Bassett Macaulay, president of the Sun Life Assurance Company of Canada, who had made a series of gifts to the department. In presenting him the dean of the faculty of law mentioned that, like Lord Macaulay, the present recipient of the degree was descended from the Macaulays of Uig in the island of Lewis. His father had emigrated to Canada, where their guest had built up one of the foremost insurance corporations in the world. After the degree had been conferred Mr. Macaulay said that the study of endocrinology had been one of his hobbies for at least twenty-five years. This might seem a strange recreation for a layman, but his object had not been the acquisition of knowledge of merely theoretical value. Medical science had made marvelous progress during the last two generations in combating disease, chiefly in improved sanitation and in the knowledge of the nature of infection, but he thought that most of the great problems of non-infectious degenerative diseases of the latter third of life still remained unsolved. Great advances he felt reasonably certain would be made in the understanding of the endocrine glands during the next twenty-five years. He had been deeply interested in the splendid work that was being done in the animal genetics department of Edinburgh University and he was pleased that the biochemical department of McGill University was now actively cooperating with Edinburgh. He congratulated the University of Edinburgh on the part it was taking in the great work of the future. At a luncheon which followed the ceremony in the Library Hall of the Old University, Sir Thomas Holland mentioned that during the past two years Mr. Macaulay had given to the genetics department of the university contributions which amounted in all to £67,000; the university, he said, would endeavor to justify the confidence he had shown in its work.

The new buildings of the animal breeding research department of the University of Edinburgh are situated at West Mains Road. The original idea of this

department, conceived before the war, formed part of the plans of the development commissioners. After the war the plans were reconsidered, but shortage of money prevented development of the work on a large scale. In 1920 Dr. F. A. E. Crew, who was an assistant in the department of zoology of the university, was asked by Sir Edward Sharpey-Schafer, then chairman of the joint committee, to take charge of the embryo department, and a few rooms in the Old Infirmary buildings were devoted to its work. Here some sound scientific work was done. Studies on wool began in 1923, and studies on pigs in 1927, other subjects of agricultural importance being taken up later. In 1928, as the result of a gift of £30,000 from the International Education Board and of £10,000 from Lord Woolavington, the department was reorganized, and Dr. Crew was appointed to the newly founded chair of animal genetics. The buildings which have just been opened were then started. Their purpose is to provide facilities for work of a purely scientific nature which is expected to have an important effect upon agriculture in about fifteen or twenty years' time. At present inquiries are being undertaken into the inheritance of milk yield in cows, and into the ideal type of bacon-yielding pig.

THE GIANNINI FOUNDATION FOR AGRICULTURAL ECONOMICS AT THE UNIVERSITY OF CALIFORNIA

GIANNINI HALL, the gift of A. P. Giannini, built primarily to house the Giannini Foundation for Agricultural Economics, has been completed and is ready for occupancy by various divisions of the University of California College of Agriculture. At the present time, the Giannini Foundation will not require all the space provided by the four floors of the structure, and the college administrative offices, agricultural, extension, forestry and agricultural economics, will be housed there.

The building cost $500,000, and is the third of the agricultural group on the Berkeley campus. It is, in floor plan and shape, practically a duplication of Hilgard Hall. The building is 280 feet in length, 64 feet through the center, and the wings are 63 feet in width. In addition to university activities, cooperative offices such as the California Farm Bureau Federation, United States Forestry Experiment Station and the National Park Service will be housed in the building.

The director is Professor C. B. Hutchison, formerly director for Europe of the division of agricultural education of the International Education Board. Members of the staff in addition to Dr. Howard Ross Tolley, formerly chief of the bureau of agricultural economics for the U. S. Department of Agriculture, now professor of agricultural economics and assistant director of the foundation, include Dr. George M. Peterson, formerly of the agricultural economics staff of the U. S. Treasury Department, and Dr. J. M. Tinley, of the Department of Agriculture of the Union of South Africa. In September Professor Leland Spencer, of Cornell University, will assist the foundation in a special six-months' study of the milk surplus problem on which the local station is now working.

The station will attempt to put California agriculture and horticulture as a whole on a business basis, with the grower receiving the monetary return that his effort will produce. Through the Giannini Foundation, according to the announcement, it is expected that "the state will be in a position to take care of every phase of agriculture from the moment the farmer or grower starts in search of a suitable piece of land until his crops are placed on the tables of the ultimate consumers throughout the world."

STATE LANDS AND WILD LIFE OF WISCONSIN

THE development and utilization of the land resources of Wisconsin to the end of giving each man, woman and child an environment for a life pattern containing all the attributes of growth, beauty and constructive living is the dominant purpose of the Wisconsin Land Inventory program, according to John S. Bordner, who is in charge of the inventory and who gave an account of the project at a recent meeting of the Wisconsin Academy of Sciences, Arts and Letters.

Those areas least occupied for agriculture and already being zoned for other uses are being first evaluated, in enumerating some of the things done to coordinate these various factors and to aid in the administration of land for diverse uses. The depth of lakes, the nature of their water, glacial action, sources of ground water, geographical distribution of plants, soil genetics and the trend in forest succession are being taken into account.

Through these and many other studies it is possible to show how many acres there are which have worthwhile timber growing on them and how many have worthless brush or are sodded over with prairie grasses, how much swamp there is which will produce timber and how much is worthless for anything except to grow Christmas trees for the children of Wisconsin or to continue as a habitat of rare and beautiful plants.

We also have one crew of two men determining the age and rate of growth of timber of different kinds and on different soils. From this study, it is possible to calculate just what each kind of forest will produce