whole-heartedly with the Indian Office. Thus he is prepared to cooperate in advising on problems of land-tenure, knowing that the end in view is to obtain more land and better land for the Indians, and not to ascertain that "irreducible minimum" which can be left to the native, as is the problem of the administrative advisers in Africa. But we must have a care, nevertheless, that aid given the Indian Office does not in some future administration stimulate an urge for retrenchment that might bring about the absorption of that distinctive governmental organization of a purely scientific anthropological character, the Bureau of American Ethnology, by that other governmental agency whose concern is the practical one of administering to the needs of the Indians.

Nor must we be forgetful of that other type of applied anthropology, whose application is to our own problems. From a purely sporting point of view, so to speak, it is here that we have the best right to make ourselves heard, inasmuch as the experimental results of our advice can react only upon ourselves, and not on some primitive folk. And if our contribution at present still remains less positive than some would have it, we can make it with the knowledge that eventually it will be more positive, and surer, and when given, will carry power. One such "application" is particularly pertinent. In our university classes, the anthropological point of view is being daily presented to students who come to the subject with open minds. Whether these students be future administrators of colonies, or citizens who stay at home, the broadening influence of the realization that all human culture has its special dignity, and that the invasion of one culture by another, and the imposition of the patterns of one people upon another, is an affront to this dignity, must, in time, have its effect. Is it not here that the really important use of our knowledge can be made, rather than in the *ad hoc* advice we may, as experts, give administrators of native folk?

The answer, for the American anthropologist, must be unequivocal. The opportunity to aid those on whose side we should be ranged in the conflicts arising from the clash of cultures of unequal strength happens to make it advisable at the moment for us to grasp the opportunity to give direction to those who have the power as well as the will to better the conditions of Indian life. Let it be recognized, however, that we do this with the understanding in our own minds and in the minds of those whom we are advising that for us as scientists the search for truth must come before all else. The debt we owe the society that supports us must be made in terms of long-time payments, in our fundamental contributions toward an understanding of the nature and processes of culture and, through this, to the solution of some of our own basic problems.

OBITUARY

ALBERT SPEAR HITCHCOCK

ALBERT SPEAR HITCHCOCK, the eminent agrostologist, died on December 16, 1935, on board the S.S. *City of Norfolk,* homeward bound from Europe with his wife. He had attended the International Botanical Congress at Amsterdam as a delegate and remained in Europe studying the grass collections in several large herbaria. After a heart attack on the 14th the end came quietly, his wife beside him, on the morning of December 16.

He was born on September 4, 1865, at Owasso, Michigan, grew up in Nebraska and Kansas, attended Iowa State Agricultural College, where he was a student of Professor Charles E. Bessey and of Professor Herbert Osborn, graduating in 1884, the youngest of his class. He was appointed assistant in chemistry for 1885 and took post-graduate courses in chemistry and other sciences and continued work in botany under Professor B. D. Halstead, Professor Bessey's successor. In the fall of 1886, just 21 years old, he was appointed instructor of chemistry at the State University, Iowa City. In 1889 he gave up this position to go to the Missouri Botanical Garden, St. Louis, under Dr. W. Trelease, as instructor in botany in Washington University and curator of the herbarium.

In 1890 began his career as botanical explorer and productive taxonomist. The first trip was one of three months' duration to the West Indies, with Dr. J. T. Rothrock, of the University of Pennsylvania, and two young assistants.

In January, 1892, he was appointed professor of botany and botanist to the experiment station at the Kansas State Agricultural College, Manhattan, Kansas, remaining there nine years. Several vacations during these years Professor Hitchcock spent botanizing in Florida.

In March, 1901, he went to Washington as assistant chief of the Division of Agrostology, of which Professor F. Lamson-Scribner was chief. The work was mostly economic, and in the course of his work he traveled through the southeastern states, and from Colorado and Wyoming to the Pacific Coast.

Professor Hitchcock was assigned work on control of sand dunes, and in October was sent to Europe to investigate methods in use. He visited the dune regions of Europe and published the results in the Bureau of Plant Industry Bulletin 57.

In the brief record Professor Hitchcock kept of his years, travel is given first place, indicating how important he held it to be. He visited every state in the Union, studying farming conditions and plant geography at first hand. Until 1905 his work had been chiefly economic. In the spring of 1905 he and Professor C. V. Piper practically exchanged places. Professor Piper was in charge of the Grass Herbarium and yearned for economic work, while Professor Hitchcock carried on economic work but devoted such time as he could find to taxonomic work. An arrangement was made, satisfactory to both, by which Professor Hitchcock took over the Grass Herbarium.

Beginning in 1905, a series of forty-five botanical field books gives itineraries of all his numerous botanical travels, including all parts of the United States, Cuba (1906), Alaska (1909), from Sitka to Yukon Territory, down the Yukon and north of the Arctic circle, across country afoot to Hot Springs and Nenana, Seward Peninsula, Nome—collecting in all at thirty-one stations, ending with British Columbia and Alberta. From July 5 to October 14, 1910, Professor Hitchcock, accompanied by his son Frank, who was then eighteen years old, explored Mexico. In 1911, again with Frank as assistant, he collected in the Canal Zone and Panama, Costa Rica, Nicaragua, Honduras, El Salvador and Guatemala. In 1912, with his son Albert, he botanized throughout Jamaica, Trinidad and Tobago. The summer of 1913 was spent in the western states; 1914 in the Middle West and Canada as far north as Athabasca Landing, Alberta; 1915 in the Pacific Coast and Southwest. In 1916, accompanied by Albert, he explored the Hawaiian Islands. In 1917 and 1918 only short trips were made, to the Adirondacks and New Hampshire, and from Arkansas to Colorado. In 1919, with the five children grown, Professor Hitchcock began a series of delightful trips on which his wife accompanied him, not in the field but remaining at their base, drying the collections and sharing the hardships. From October, 1919, to February, 1920, they worked in British Guiana, after spending a few days each on several islands of the Lesser Antilles. From May, 1921, to December, accompanied by his wife, Professor Hitchcock visited Hawaii, the Philippines, Japan, China, including the little known island of Hainan, and Indo-China. In May, 1923, he sailed for Guayaquil, Ecuador, spending nine months botanizing in Ecuador, Peru, Bolivia, northern Argentina and Chile, returning in February, 1924. In 1928 with his wife he worked Newfoundland and Labrador.

When, in 1929, the British Association for the Advancement of Science met in South Africa in cooperation with the South African Association for the Advancement of Science, one representative from each major science was invited as a guest from the United States. Professor Hitchcock was the botanist chosen. At the meeting he read a paper on "Grasses in Relation to Man." Following the meetings at Cape Town and Johannesburg, he visited Victoria Falls, Zanzibar and Amani Agricultural Institute, Kilimanjaro, Uganda and Lake Victoria. The visit to Africa was a continual delight to Professor Hitchcock, insatiably eager to see every part of the earth, and the gracious hospitality extended to him warmed his heart. Sailing from Mombasa he writes, "Having about two hours to wait before the departure of the steamer, I made a good collection of grasses from a hill near the dock," a mark of eager interest most characteristic of him.

During all these years, beginning with *Leptochloa* in 1903, Professor Hitchcock published a succession of scholarly revisions of grass genera, regional grass floras, and also a large number of other papers, his bibliography containing some 250 titles.

Most taxonomists of former times, notably "narrow specialists," were "closet botanists," knowing only dried plants in the herbarium. Professor Hitchcock maintained that the taxonomist must be a field worker. His collections of more than 25,000 numbers brought to light a great many species new to science and extended the ranges of many more. His observations on the habits and range of variations of grasses in the field and his wide knowledge of plant geography and special knowledge of grasslands developed a sound taxonomic judgment and the ability to interpret specimens in the herbarium.

It was just as the young Hitchcock was developing that the idea of basing names on a type specimen, instead of on authority, began to stir botanists, especially Americans. The scientific soundness of the idea appealed to him, and more than any one else he has educated the botanists of the world in the "type concept." In the introduction to his classic revision of *Agrostis* is the first clear exposition of the type method and the first discussion of types of names reduced to synonymy as well as of those of valid names. Professor Hitchcock's search for types began on his first visit to Europe, where he studied the types of American species of *Agrostis* in the Trinius Herbarium in St. Petersburg, in the Linnaean Herbarium, and elsewhere. In 1907 he spent several months in Europe visiting herbaria in Belgium, France, Spain, Italy, Switzerland, Germany, Austria, Russia, Sweden and England, seeking types of American grasses. Such an intensive quest for types had never before been carried on. Nobody knew where many of the types were. To help others in such quests Professor Hitchcock prepared a list of "Locations of Types," and multigraphed copies were distributed in 1934, with

requests for further information. A second list was distributed in 1935.

The last four months of his life were spent in herbaria at Leiden, Utrecht, Brussels, Paris, Geneva, Berlin, London, Cambridge and Oxford, seeking types of grasses in preparation for a work already begun on the genera of grasses of the world.

The Grass Herbarium increased under Professor Hitchcock's charge to at least four times what it was in 1905, until it is now the largest and by far the most nearly complete grass collection in the world. His devotion to it was demonstrated even before he came to be in charge of it. Professor Lamson-Scribner offered to sell his private herbarium, containing many of his types, but Professor Piper did not care to recommend its purchase. To keep the types in Washington Professor Hitchcock, in the presence of both men, offered to buy it. The offer was accepted, the purchase being made in February, 1905. In 1913 the Scribner Herbarium was bought by the government for the price paid Professor Scribner. The valuable agrostological library accumulated over a period of forty years he left, in the custody of the Smithsonian Institution, as a gift to the Grass Herbarium to be kept permanently intact with the herbarium.

While Professor Hitchcock specialized on grasses for the last thirty-five years his interest in the advance of botany as a whole is shown not only in the work of locating types of grasses, and other plants as well, but also in several notable addresses such as "The Scope and Relations of Taxonomic Botany," and in time-consuming service on various committees. In 1919 he was made a member of the Organization Committee for Biological Research of the National Research Council, and in 1920 chairman of the executive committee of the newly organized Institute for Research in Tropical America, remaining chairman until June, 1926. The idea of preserving a bit of tropical jungle in the Canal Zone originated with him. He pushed the project vigorously, and as a result Barro Colorado Island was made a permanent preserve.

One of Professor Hitchcock's great contributions to science was his helpfulness to colleagues in places remote from large libraries and herbaria, and his encouragement of younger workers. To the succession of students who have studied at the Grass Herbarium, he gave freely of his time and learning, but he always sought to develop independent judgment in the student. His truly scientific attitude and magnanimity were displayed in his relations with his colleagues and especially with the staff of the Grass Herbarium.

The publication of the Manual of Grasses of the United States and the fact that the first printing was sold out and a second ordered before the work had been out two months was a great satisfaction to him. Before leaving for Amsterdam in August last he finished the manuscript of a Manual of Grasses of the West Indies.

A characterization of the man could hardly be better worded than it was by Dr. Willis Lynn Jepson in the copy of his "Flora of California," presented to Professor Hitchcock in 1925: "Eager explorer, far-seeing botanist, and wise promoter of scientific research in America."

AGNES CHASE

BUREAU OF PLANT INDUSTRY

RECENT DEATHS

DR. IVAN PETROVICH PAVLOV, the eminent physiologist of Leningrad, died on February 27 at the age of eighty-seven years.

DR. CHARLES JEAN HENRI NICOLLE, director of the Pasteur Institute branch in Tunis, died on February 28. He was sixty-nine years old.

DR. GEORGE DAVID ROSENGARTEN, vice-president of the Powers-Weightman-Rosengarten Company for twenty-two years, president of the American Chemical Society in 1927, died on February 24 at the age of sixty-seven years.

DR. C. BURNS CRAIG, associate medical director of the Neurological Institute of New York and assistant clinical professer of neurology at the College of Physicians and Surgeons of Columbia University, died on February 4 at the age of fifty-two years.

SCIENTIFIC EVENTS

A HABITAT GROUP OF BABOONS FROM ETHIOPIA AT THE FIELD MUSEUM

A HABITAT group of gelada baboons from Ethiopia, a species of ape which has no counterpart elsewhere, was placed on exhibition in December in the Carl E. Akeley Memorial Hall at the Field Museum of Natural History, Chicago. The group, prepared by Leon L. Pray, staff taxidermist, shows an old male, with the mantle of long flowing hair producing a decidedly leonine effect characteristic to geladas of his age, seated on a rocky prominence. Just below him are a female and a half-grown young baboon, engaged in exploring crevices in the rock. The specimens were collected by the Field Museum-Chicago Daily News Abyssinian Expedition.

The gelada baboon, according to Dr. Wilfred H. Osgood, curator of zoology, and leader of the expedition which collected the specimens, is strictly a resident of Ethiopia, and is confined to the rock-walled canyons and high mountain crests. Apparently it has