

various provinces in the islands where those suffering from mild forms of leprosy may be treated.

THE board of directors of the Cottage Hospital, Santa Barbara, announce gifts amounting to more than half a million dollars for research work. Edward L. Harkness, George O. Knapp and Max C. Fleischmann each gave \$200,000, Edward Lowe, \$5,000, and E. Palmer Gavitt, a new building to be devoted to research. The gifts of Mr. Harkness and Mr. Knapp are to be invested and the income only used for research. The Fleischmann donation, after providing for certain improvements to buildings, will be invested and only the income used.

UNIVERSITY AND EDUCATIONAL NOTES

DARTMOUTH COLLEGE has received a bequest of \$1,619,550 from the estate of the late Edwin W. Sanborn.

BY the provisions of the will of the late George Warren Brown, a shoe manufacturer, the residue of his estate, amounting to not less than \$630,000, is given to Washington University, St. Louis.

GIFTS to the University of Chicago announced by the board of trustees are \$25,000 from the Milbank Fund, New York, for research on infantile paralysis, under the direction of Dr. Edwin O. Jordan and Dr. Ludvig Hektoen; \$449.60 from Dr. Lester E. Frankenthal to cover purchases for the medical library, and \$5,000 from Mr. Frederick Bode and \$1,000 from Mr. Herman H. Hettler for the Frank Billings Medical Clinic Fund.

DR. E. D. BALL, formerly director of research work in the U. S. Department of Agriculture and assistant secretary of agriculture, recently in charge of celery insect investigations for the Florida State Plant Board, has been appointed dean of the college of agriculture and director of the agricultural experiment station at the University of Arizona. He will assume his new work about October 1. Professor J. J. Thorner, at his own request, has been transferred to his old position of professor of botany and botanist in the experiment station. He will continue his research work on the Flora of Arizona and teach the courses in systematic botany.

PROFESSOR JOSEPH EUGENE ROWE has resigned his position as head of the department of mathematics and director of extension at the College of William and Mary to accept the presidency of the Clarkson

Memorial Institute of Technology at Potsdam, New York.

DR. ARTHUR THOMPSON EVANS, since 1920 professor of botany and plant pathology at South Dakota State College, has been appointed professor of botany and head of the department at Miami University.

DR. W. H. BAIR, of Purdue University, has been appointed professor and head of the department of physics at Clarkson College.

DR. H. A. BENDER, of the University of Illinois, has been appointed assistant professor of mathematics at the Municipal University of Akron.

DISCUSSION

THE DISCOVERY OF LIVING MICRO-ORGANISMS IN ANCIENT ROCKS

ABOUT one and one half years ago the writer began some experiments which he has carried on since, as time permitted, to determine whether or not living spores of bacteria or fungi or resting bodies of other micro-organisms might still exist inside of ancient rocks. The basis of my decision to start upon such an apparently hopeless quest will be given in a future detailed report on the results obtained. It suffices for the purposes of this preliminary note to state in general terms the startling fact that I have discovered living organisms in a Pre-Cambrian rock from the Algonkian in Canada and in one from the Grand Canyon of the Colorado. I have also discovered other types of micro-organisms in a Pliocene rock which derives from a depth of several hundred feet from which it has recently been uncovered. It is impossible in this note to furnish details of the technique employed, but it may be said that drastic sterilization measures for the outside of the rocks studied were employed. While some of the organisms which appeared in the cultures are doubtless derived from the free air which had momentary access to the rock in the process of the technique employed, certain organisms were found which occur in every plate culture made with the rocks examined and which are of a strikingly different type from any which are usually found in plates made with soils or rocks. These organisms make a very sparse growth on media which support excellent growth of other organisms and seem to belong to the interior of the rocks studied. At least one and perhaps two such singular types of organisms were found which possess many characters of the Actinomyces group. They are spore-bearing rods occurring in chains, and I have become convinced that they are indigenous to the rocks in the spore