SIX projects of scientific research are being conducted in Wisconsin this year in problems of state conservation, and in several of the projects members of the University of Wisconsin staff are conducting the work. The research bureau of the Wisconsin Conservation Commission, which is fostering the projects, is made up of scientific men who are cooperating with the commission. By a study of soil and forest and forest cover in northern Wisconsin, the commission will be able to estimate how much future forests will be worth. This survey is under direction of John Bordner as a cooperative venture with the state department of agriculture. Growth of trees, a game survey and charting of many lakes which have hitherto not appeared on maps, are also subjects of the survey. Dr. E. A. Birge and Professor Chancey Juday are continuing their study of fish foods and lake life, with headquarters at Trout Lake, Vilas County. The data which they are collecting will aid in developing a more exact method of propagating and planting fish. Dr. A. O. Gross, Brunswick, Maine, is conducting an investigation of such game birds as prairie chicken in the state, through laboratory and field studies. Growth and welfare of vegetation in seined and unseined areas of lakes at Madison, with special reference to lake bottom vegetation where carp is seined, are being studied by men from the department of botany of the university. Size of mesh, length of nets, methods of dragging and lifting nets and results of seining at various times of the year are being observed in another study, in an attempt to improve methods of eradicating carp.

DR. RAYE R. PLATT, of the American Geographical Society, New York, and Professor J. Fred Rippy, of Duke University, have been appointed delegates by President Hoover to the first general assembly of the Pan-American Institute of Geography and History, to be held on September 16 at Mexico City. The assembly was authorized under a resolution of the Pan-American Conference at Havana last year.

THE American Chargé d'Affaires at Caracas, Venezuela, reports that he has received a telegram from Dr. H. S. Dickey, at Ciudad Bolivar, that his expedition was wrecked 1,200 miles up the Orinoco River, but that all are safe. Dr. Dickey headed an expedition up the Orinoco River for the purpose of collecting anthropological material for the Museum of the American Indian.

EXPERIMENTS in the attempt to render harmless the icebergs in the North Atlantic will be made this month by Dr. Howard T. Barnes, of McGill University. An Associated Press despatch reports that the expedition will be headed and financed by R. D. van Horne, with Dr. Barnes as technical adviser. It will sail from Halifax on the 350-ton yacht *Uvira*. Operations will be carried out in the vicinity of Belle Island Strait, off Twillingate Harbor and off St. John's, Newfoundland. The experiments will include the projection of parachute flares from a gun in the direction of icebergs in order that their silhouettes may be discerned. Other experiments will be made with submarine microphones, with which it is expected to pick up the distinctive sound made by escaping air from the under side of the icebergs.

THE London *Times* reports that the Devonshire Association and the Newcomen Society held on July 25 at Dartmouth the bicentenary celebration of the death of Thomas Newcomen, the inventor of the steam-engine. Engineer-Captain E. C. Smith, R.N., in an address, spoke of the four great landmarks in the history of the steam-engine, the first of which was the introduction of the atmospheric steam-engine by Newcomen; the second, the discoveries of James Watt; the third, the adoption of the marine compound engine, and the fourth, the invention of the turbine. Newcomen's invention was the first successful application of science in the development of the motive-power engine. Little honor had been paid to him in the past, but in 1921 a memorial was erected at Dartmouth, and the Newcomen Society, founded a few years ago for the study of the history of engineering and technology, hoped to obtain permission to place another memorial on the walls of Bunhill Fields, London, where he was buried in 1729, in a grave the site of which is now not known.

UNIVERSITY AND EDUCATIONAL NOTES

CLARENCE H. MACKAY, whose fortune was founded by his father's discovery of the Comstock lode, has given $500,000 for the school of science of the University of Nevada at Reno. This makes a total of more than $1,500,000 given to the university in memory of John W. Mackay by Mr. Mackay and his mother.

THE appointment of Dr. Nathaniel Allison as professor of surgery in charge of the division of orthopedic surgery, and of Dr. Edmund Andrews as associate professor of surgery in the clinics of the University of Chicago is announced. Dr. Allison, who is professor of orthopedic surgery at the Harvard Medical School, was dean and professor of orthopedic surgery at Washington University, St. Louis, until his Harvard appointment in 1923. Dr. Andrews is a graduate of Yale University and of

Rush Medical College. He has taught at Northwestern University and at the University of Illinois, where he is now an associate professor of surgery.

AFTER a service of forty-five years as professor of chemistry and head of the department of chemistry at Colgate University, Dr. Joseph Frank McGregory has resigned and has been appointed professor emeritus of chemistry. Dr. R. Chester Roberts, who has been acting head of the department during the past year, has been appointed head of the department. Dr. Raymond J. Hemphill has resigned as assistant professor of chemistry and has accepted a research appointment at the Pittsfield plant of the General Electric Company. Dr. Kenneth H. Goode, research chemist for the Sylvania Products Company, of Emporium, Pennsylvania, has been appointed assistant professor of chemistry and Dr. Paul B. Gleason assistant professor of physics.

AT the school of medicine, Western Reserve University, the following promotions and new appointments have been made in the preclinical departments: Dr. George B. Ray has been promoted to be associate professor of physiology; Drs. O. W. Barlow and W. F. von Oettingen to be assistant professors of pharmacology; Dr. Alan Moritz to be assistant professor of pathology, and Dr. Edward Muntwyler to be senior instructor in biochemistry. New appointments have been made as follows: Dr. David Seecof, assistant professor of pathology; Dr. La Verne Barnes, senior instructor in bacteriology and hygiene; Drs. J. P. Quigley and F. D. McCrea, senior instructors in physiology; Dr. Richard Bolt, associate in hygiene and preventative medicine, and Mr. F. C. Bing, instructor in biochemistry. Dr. Howard T. Karsner, professor of pathology since 1914, has been given the added title of director of the institute of pathology. The department of pathology recently moved from the school of medicine to the institute building, which has just been completed. Dr. Victor C. Myers has been elected secretary of the faculty.

DR. RALPH B. SEEM, of the Billings Memorial Hospital of the University of Chicago, has been appointed physician superintendent of hospitals and professor of hospital administration in the medical school of Stanford University, in place of the late Dr. R. G. Brodrick.

PROFESSOR F. WOOD JONES, Rockefeller professor of physical anthropology in the University of Hawaii, has accepted a professorship of anatomy at the University of Melbourne to succeed Dr. R. J. A. Berry, who recently resigned.

RICHARD VYNNE SOUTHWELL, F.R.S., fellow of Trinity College, Cambridge, has been elected professor of engineering science in the University of Oxford, in succession to Professor C. F. Jenkin.

DISCUSSION

COLUMNAR STRUCTURE IN LIMESTONE*

THE occurrence of columnar structure in limestone is rare. As a result, its origin and characteristics have not been adequately recorded in geologic literature.

The late Dr. Salisbury mentions columnar structure[1] in subaqueous clay in the vicinity of Menomonie, Dunn County, Wisconsin. He found distinct concentric lines on the cross-section surfaces of the columns and ascribed their origin to concretionary action. Other columnar structures in Devonian waterlime have been reported[2] from the vicinity of Stroudsburg, northeastern Pennsylvania, but no detailed account of the nature of their origin is available. They are known to be very similar to columnar structure in basalt and have ball-and-socket joints.

In limestone only one example of this structure has ever been recorded. This occurs in the lower two thirds of a bed in Silurian limestone at the base of Mt. Wissick on the shore of Temiscouata Lake, opposite Cabano, Quebec. Dr. E. M. Kindle in an excellent article, "Columnar Structure in Limestone,"[3] describes the stratigraphy of the locality and shows that the limestone was formed under littoral conditions. He assigns its development into columns to mud-cracks which extended to a depth of from ten to twenty-four inches and which were filled up by sediments having a somewhat more argillaceous composition than the limy beds cut by the mud-cracks.

In the summer of 1927, the writer, while a member of the Rawson-MacMillan Expedition for Field Museum, had the opportunity to observe at Silliman's Fossil Mount, Frobisher Bay, Baffin Land, another example of limestone breaking into irregular

* Since this article has gone to the press a paper by Branson and Tarr on "New Types of Columnar and Buttress Structures," believed to have originated through differential solution and pressure acting in a manner similar to that which produces stylolitic structures, has appeared in the December, 1928, number of the *Bulletin of the Geological Society of America.*

[1] R. D. Salisbury, "Columnar Structure in Subaqueous Clay," SCIENCE, new ser., 5: 287, 1885.

[2] W. O. Crosby, "Dynamical and Structural Geology," Bost. Soc. Nat. Hist., 1892, p. 268.

[3] Canada Geological Survey, Museum Bull., No. 2, Geological ser., No. 14, 1914, pp. 35–39.