Botany" in two volumes, afterwards expanded to three. Cowles contributed the volume dealing with ecology covering the branch of the subject known as autecology. In it, the theory of mechanical causation was stressed rather than teleology and adaptation which had previously been somewhat widely accepted.

No teacher brought his students more directly to nature than Cowles. Field trips, varying in length from one day to many weeks, inspired others to use the out-of-doors classroom. This led to his useful activities in all lines of conservation. No one was more influential than he in establishing the State Park system of Illinois and the Forest Preserves of Cook County, Ill. For many years he was president of the Chicago Academy of Sciences and a charter member and an active supporter of the Illinois State Academy of Science. He was also a patron and trustee of the Geographic Society of Chicago and president of the society for a term of years.

A member of many other scientific societies he served as president of the Association of American Geographers in 1910, as president of the Botanical Society of America in 1922 and vice-president of Section G of the American Association for the Advancement of Science in 1913.

In 1935 the July issue of *Ecology,* the official journal of the Ecological Society, was dedicated to Cowles by his students and friends. It was filled with articles from students and colleagues from America and from several European countries. From an appreciation of their friend and teacher, written for that issue of *Ecology* by W. S. Cooper, we quote the following paragraph:

"A man may be a great scientist and a great teacher and yet inspire in his colleagues and students little affection or none at all. With Cowles it was far otherwise. Something more than mere respect for high scientific attainment is necessary to account for the fact that, when the plan of this special number of *Ecology* was made public, more than three hundred persons responded. With almost every contribution came a letter expressing admiration for Cowles as a scientist, as a teacher, and above all, as a man. These facts speak for themselves; formal tribute is superfluous. And yet, merely because it is a joy to do so, we make mention of a few of his many lovable traits—his unfailing good humor, his far-famed ability in telling a story, his readiness to give ungrudgingly of time and effort in the service of students and friends, his eagerness to discover and commend whatever was meritorious in the work of a fellow scientist or admirable in the man himself.

"He relinquished his active labors secure in the consciousness of work well done, confident of achievement beyond the ordinary lot. He laid the foundation for a new and useful branch of science, he constructively influenced the thought of hundreds of investigators and teachers, and in his professional and personal contacts he made for himself a multitude of devoted friends."

GEORGE D. FULLER
THE UNIVERSITY OF CHICAGO

RECENT DEATHS AND MEMORIALS

JOHN ALLEN FULTON, director of the Mackay School of Mines of the University of Nevada, who at one time was Republican nominee for Governor of Nevada, died on October 9 at the age of sixty-one years.

DR. H. O. KNIGHT, professor and head of the department of anatomy at the University of Texas, died on October 5 at the age of fifty-eight years.

DR. ROBERT ALEXANDER CRAIG, since 1904 professor of veterinary science at Purdue University, died as the result of a motorcycle accident on October 12. He was sixty-seven years old.

JOHN STUART CAMPBELL, assistant professor of optics at the University of Rochester, died by suicide on September 26. He was thirty-five years old.

FREDERIC THEODORE BIOLETTI, professor of viticulture at the University of California, died on September 12. A correspondent writes: "He was one of a group of young men who in the 1890s at Berkeley developed under the influence of Professor Edward L. Greene a permanent interest in botany. He made many critical plant collections which have been cited in Engler's 'Pflanzenreich' and other works. His vocation was viticulture. In this subject he was for nearly fifty years instructor and professor in the College of Agriculture of the University of California, save for an interruption of two years' teaching in South Africa. He published many papers in his field."

A PICTURE of Dr. Warren P. Lombard, a member of the faculty of the Medical School of the University of Michigan from 1892 to 1923, was recently presented to the Medical School library in honor of his memory by a close friend, Colonel Ambrose Pack. Dr. Lombard was eighty-four years old at the time of his death last July. An obituary appreciation by Dr. Robert Gesell appears in the issue of SCIENCE for October 13.

SCIENTIFIC EVENTS

BIRD PROTECTION IN THE BRITISH EMPIRE

REPORTS on the present state of legislation for the protection of birds and its effectiveness in more than twenty different countries are printed in the fifth bulletin of the International Committee for Bird Preservation. The London *Times* gives an account of several relating to countries in the British Empire.

Writing of Australia, A. H. Chisholm expresses the opinion that lyre-birds, despite the fact that they lay only one egg in a season, are increasing throughout their range, which is from southern Victoria to southern Queensland. Certain other species, notably several beautiful parrots, have, however, decreased considerably, though, with the exception of the small varieties of emu, no Australian bird is known to have become extinct since the white occupation of the country. In Canada, according to Hoyes Lloyd, the insectivorous birds protected by the Migratory Birds Treaty with the United States are in no serious danger, and the attitude of children towards birds is, owing to better education, showing a great improvement. The shooting season for ducks and geese has since 1936 been limited to two months, and the shore-bird family is almost totally protected. The extension of bird sanctuaries has continued in Canada, but some of the prairie waterfowl sanctuaries are at present useless owing to drought.

E. V. Sanderson reports on the position in New Zealand, where the Forest and Bird Protection Society "is now a powerful and well-to-do organization." Unfortunately moose and other introduced mammals have done much damage by destroying natural vegetation in such reserves as the Fiordland National Park, which covers 2,600,000 acres. In New Zealand the upland game-birds have decreased greatly, leaving the grey duck to face most of the shooting, with the result that this bird is now becoming rapidly scarcer.

In an "informal report" on what is happening in South Africa, Dr. E. Leonard Gill says that wild birds seem to him to be better treated there than in most parts of the world, largely because in Africa sportsmen have shot big game and have not troubled much to shoot birds.

The bulletin also contains reports from Argentina, Mexico, Japan and many European countries, as well as the minutes of the meetings held at Rouen last year.

THE NEW MILFORD LABORATORY OF THE BUREAU OF FISHERIES

CONSTRUCTION of a new laboratory for the Fisheries Service at Milford, Conn., according to the bulletin issued by the service, is now under construction as a Public Works Administration project. When completed, it will serve as a center for oyster-cultural research for the New England area and may be used also for investigations on other aspects of fishery problems.

The new laboratory will be housed in a two-story, fireproof building, 70 by 35 feet, constructed of brick and cinderblocks. The building is to rest on yellow-pine piling driven 35 to 40 feet into the ground. The first floor will contain the director's office and laboratory, one laboratory room 21 by 16 feet, two small rooms for investigators, a room for meetings, lectures and displays, 22.7 by 22 feet, rooms for the heating plant and mechanical equipment, lavatories and a carpenter shop.

Chemical, physiological and biological laboratories, each about 23 by 16 feet, will be placed on the second floor, together with the chemical stock room, balance room, photographic room and library. All the laboratories will be provided with standard equipment, *i.e.*, gas, electricity, cold and hot fresh water, sea water, compressed air and the necessary furniture. The chemical room is to be equipped with standard chemical tables and two large fume hoods with forced draft. The sea-water system consists of a non-corrosive pump of suitable capacity, a large steel rubber-lined tank in the attic and lead pipes delivering the sea water to drain tables placed in each of the laboratory rooms. With the exception of the director's office and display room, the floors are of concrete covered with rubber matting. The building will be steam-heated by means of an automatic oil burner.

There will be a series of large concrete outdoor tidal tanks, about eight feet deep, built along the water line. Each tank is individually filled with sea water through tidal gates and the depth of the water can be maintained at three different levels. Seven of these tanks have been erected and have proved useful for keeping animals for various experiments.

Before designing the laboratory and selecting its equipment, a careful study was made of existing biological stations, and efforts were made to introduce the necessary up-to-date equipment, yet at the same time to avoid expensive structural features. This work benefited from a detailed examination of plans and buildings of the Marine Biological Laboratory and the Oceanographic Institution at Woods Hole, Mass. Many of the architectural features proving useful in these institutions were incorporated in the plans. To conform with its surroundings, the Milford Laboratory is of simple design and colonial in style of architecture.

The Bureau of Fisheries has conducted oyster investigations in Long Island Sound from headquarters at Milford for nearly twenty years. The work to be conducted in the new laboratory will be devoted principally to the study of improved methods of oyster culture, and special attention will be given to the possibility of controlling the propagation of oysters and other commercial mollusks.

THE THOMAS R. BAKER MUSEUM OF ROLLINS COLLEGE

LAST spring Rollins College received by deed from the City of Winter Park, Fla., a property known as the Aloma Golf Club to be developed by the college