try Day School in Kansas City, Missouri, and in 1917 of the Country Day School in St. Louis. From 1920 to 1927 he taught in the Santa Barbara School for Boys, but in 1923 accepted the title of honorary director of the Santa Barbara Museum of Natural History and devoted his spare time to its development. In 1927 he was elected director, a position he held at the time of his death.

Although ornithology and botany were avocations during his years of teaching, he became well known throughout the country in both fields. In addition to contributions to the Nuttall Ornithological Club, *The Auk, Rhodora, Bird Lore* and *The Condor,* he published "A Guide to the Birds of New England and Eastern New York" in 1904 and "Birds of the Pacific Coast" in 1927.

Whenever he exhausted the birds of a region he turned to its plants. After his New England "Guide," he published the "Flora of Berkshire County." After his "Birds of the Pacific Coast," he began work on the flora of Santa Barbara County and especially that of the Channel Islands. Though the fall that resulted in his death came while he was collecting the island flora, his notes were in such shape that the list is appearing in the *Bulletin* of the Southern California Academy of Sciences.

Ralph Hoffmann possessed not only the thoroughness of the scientist, but also an enthusiasm so contagious that those who knew him, especially children, left his presence either with a newly awakened love for birds and plants or with an old interest doubled.

E. H.

RECENT DEATHS

DR. ULYSSES SHERMAN GRANT, professor of geology at Northwestern University since 1899, died on September 21, at the age of sixty-five years.

DR. THOMAS G. LEE, professor emeritus of comparative anatomy at the University of Minnesota, died on September 8, at the age of seventy-two years.

OUTRAM BANGS, curator of birds in the Museum of Comparative Zoology at Harvard University, died on September 22, in his seventieth year.

DR. JOHN WYNN GILLESPIE, professor of botany at the Arizona State Teachers College and formerly National Research fellow, died of pneumonia at Albany, Georgia, on September 13. He was on his way home from a summer's vacation spent in study at the Kew Herbarium.

DR. FRANK BILLINGS, dean of the faculty of Rush Medical College since 1899 and emeritus professor of medicine in the University of Chicago, died on September 20. He was seventy-eight years old.

DR. ASTLEY PASTON COOPER ASHHURST, professor of clinical surgery at the Graduate School of Medicine of the University of Pennsylvania, died on September 19. He was fifty-six years old.

THE REV. GEORGE W. LAY, of Chapel Hill, North Carolina, a member of the American Association for the Advancement of Science, who contributed articles to SCIENCE on scientific terminology, has died, at the age of seventy-two years.

THE deaths are announced of two distinguished British surgeons: Sir Henry Simpson, the obstetrician, on September 13, in his sixtieth year, and Sir Chester James Symonds, known for his work in abdominal surgery, on September 14, at the age of eighty years.

DR. FREDERICK HENRY HATCH, a past president of the British Institution of Mining and Metallurgy and a member of the governing body of the Imperial Institute, died on September 22, at the age of sixty-eight years.

SCIENTIFIC EVENTS

THE DAVID DUNLAP OBSERVATORY

THIS observatory, which, when completed, will be presented to the University of Toronto, to be conducted by its department of astronomy, is being erected by Mrs. Jessie D. Dunlap as a memorial to her husband, David Alexander Dunlap, who died in the autumn of 1924. It is located near the village of Richmond Hill, fifteen miles north of Toronto, one half mile east of Yonge Street, Ontario's great highway to the north.

There are two chief buildings. One, sixty-one feet in diameter, of metal, will house a reflecting telescope of aperture seventy-four inches. This instrument is being built by Sir Howard Grubb, Parsons and Co., of Newcastle-on-Tyne, England, and its construction is well advanced. The building is also being supplied by the same firm. It is intended to put in the cement foundations for the building and also the pier for the great telescope this autumn in order to let them weather the storms of winter. The building will be erected next spring and the telescope a little later. This telescope will be used chiefly for spectrographic work, though some direct photographs may be taken.

The administration building will contain offices, library, lecture room, laboratories, computing rooms and workshop. Plans for it were prepared by Mathers and Haldenby, of Toronto, and the corner stone was laid on September 10. It will be 91 feet long

by 49 feet wide, with semi-octagonal projections on each end. The material used is Credit Valley limestone, with Queenston stone trimmings, both obtained in Ontario. It will have two stories and a basement. On the roof will be three domes, those at the ends being 21 feet, that at the center being 25 feet in diameter. In one of the smaller domes there will be a 19-inch reflector (with pyrex mirror), which was constructed in the university workshops; in the other there will be a battery of cameras on a single mounting. The chief parts for these cameras are already on hand and the mounting will be made in the observatory workshop. In the central dome there will be a ten-inch refractor, which will be used for the observation of planets, comets, occultations and double stars, and it will also be available for public purposes. The domes are almost ready and the Administration Building will be completed next spring.

The observatory site is in the midst of a 179-acre plot of farmland, which will be made into a park to be known as the David Dunlap Park. It will be developed by the faculty of forestry of the university, and in the coming years will produce results of scientific value as well as being a pleasant resort for the people.

C. A. CHANT

NEW BUILDING FOR ENTOMOLOGY AT THE UNIVERSITY OF CALIFORNIA

THE new building for the Divisions of Entomology and Beneficial Insect Investigations of the Southern Branch of the College of Agriculture of the University of California is now open. The building is two stories in height, with basement and attic greenhouse.

In the basement is a spray application laboratory, with a garage entrance where spray outfits or trucks may enter, fumigation tent room, carpenter and mechanics shop, storage rooms, machinery and refrigeration rooms, and a large room containing the controlled environment equipment. This equipment consists of six independent cabinets where the temperature may be maintained within 1 degree and including a range of 30 degrees to 120 degrees Fahrenheit, with the full range of humidity at any given temperature. One of these cabinets is equipped with thermo-time-control where any fluctuating temperature is automatically controlled within a 24-hour period. The light may vary from complete darkness to 1,000 watts. The air surrounding these chambers is taken in from the outside and oil filtered, and when necessary, conditioned within a limited range so far as temperature and moisture are concerned.

On the main floor is the spray laboratory, insecticide laboratory and insect physiology laboratory, aside from the usual laboratories and offices, dark room and photographic room. On this floor is also the fumigation room, equipped with a duplex 100 cubic foot vacuum fumigator, and two other fumigating rooms. In one of these rooms, as well as in the vacuum fumigators, the temperature may be controlled between 30 degrees and 120 degrees Fahrenheit, as well as the humidity. This installation is equipped with special apparatus for the use of cyanide, carbon bisulphide, carbon dioxide, ethylene oxide, formaldehyde and other fumigants.

The second floor is occupied by the Division of Beneficial Insect Investigations and consists of a series of laboratories and offices, taxonomic laboratory and graduate student and seminar room.

The attic greenhouse for growing plants and the propagation of insects is connected with an electric elevator, enabling plants to be brought from the greenhouse to the fumigating chambers or to the controlled environment room in the basement.

THE JUNIOR SCIENCE CLUBS SECTION OF THE AMERICAN INSTITUTE

THE formation of a new organization, known as the Junior Science Clubs Section of the American Institute, was announced following a meeting of a committee of teachers of science in the schools of New York City held on September 22 at the headquarters of the American Institute.

According to a statement made by Dr. Morris Meister, head of the science department of the New York Teacher Training College, who is chairman of the Plan Committee, the plan has been approved by the Board of Education, the Standing Committee of Science Teachers of New York City and other educational and scientific bodies. Its membership will consist of the junior science clubs. Under the guidance of the American Institute, it will offer to the members of these clubs larger opportunities in the field of science than they have heretofore been able to enjoy.

The plans call for a series of afternoon demonstration lectures, conducted by the science clubs in their own school auditoriums with the help and guidance of men of science. In addition, there will be evening demonstration lectures by well-known scientific men, visits to near-by industrial plants, research laboratories and observatories, and field trips for students of geology and other natural sciences. A special feature is the American Institute's Children's Science Fair, which is held annually at the American Museum of Natural History and consists of science exhibits prepared by school children. Arrangements have also been made for inter-club round table discussions, a Junior Science Clubs Congress and a publication to be sent to all member clubs.

L. W. Hutchins, director of the institute, called attention to the fact that it has been the meeting place of scientific men and laymen for over a hundred years. Now, because of the great interest shown by school