The consolidation will effect economies in administration, making it possible to handle the two units under a single administrative office. Supervisor Walter G. Mann, of the old Kaibab unit, with offices at Kanab, Utah, has moved to Williams, Arizona, where headquarters will be maintained for the enlarged Kaibab National Forest, which lies entirely within Arizona. Former Supervisor G. W. Kimball, of the Tusayan, has been transferred to the office of operations at the southwestern regional office of the Forest Service at Albuquerque, N. M. W. B. Dillon, administrative assistant of the Tusayan Forest, has been transferred to the Ouachita National Forest in Arkansas.

It is the intention of the Forest Service to attach to the Prescott National Forest the areas of the Tusayan unaffected by the Executive Order. A few thousand acres entirely under private ownership will be eliminated from the national forest boundaries.

The Kaibab National Forest is famous for its large herd of deer. From 3,000 in 1906, the deer increased under State and Forest Service protection to an estimated population in excess of 30,000 in 1924. The range began to show serious overgrazing, and starvation conditions prevailed. The Forest Service agreed to the removal of numbers of the deer to other forests and parks by trapping. Hunting was also liberalized. As a result of these measures the deer population has decreased somewhat, relieving the range from serious overgrazing. Under the Forest Service game management plans, the deer population will continue to be regulated to the capacity of the range.

The Tusayan Forest also contains many deer. It grazes in addition approximately 80,000 head of livestock annually. Both the Kaibab and the Tusayan Forest units consist largely of plateaus 7,000 to 9,000 feet high, and mountain peaks about 10,000 feet. There are almost pure stands of ponderosa pine. Besides deer, wild turkeys and other game live in these forests, and the Kaibab squirrel, a large species with white plumed tail, is found in the part north of the Grand Canyon, but nowhere else.

The new Kaibab National Forest will have a gross area of more than 1,000,000 acres. The north and south sections of it are now joined by good roads and bridges and by airline across the Grand Canyon of the Colorado River.

THE THIRD INTERNATIONAL STEAM TABLE CONFERENCE

THE third International Steam Table Conference will be held in Washington, Cambridge and New York from September 17 to 22. Invitations to the conference have been issued by The American Society of Mechanical Engineers in the name of its Special Research Committee on the Thermal Properties of Steam. The conference will provide an opportunity for research workers from abroad to inspect the experimental apparatus at the Massachusetts Institute of Technology and the Bureau of Standards, where work has been in progress since the formation of the special research committee in 1921, to review the results of research in the thermal properties of steam that have been obtained since the last conference, and to agree upon new and narrower tolerances for the values of the international skeleton tables on which the detailed published tables of Callendar in Great Britain, Hausen in Germany and Keenan in this country are based.

In this country, under the auspices of the American Society of Mechanical Engineers Special Research Committee on the Thermal Properties of Steam, experimental work has been in progress at Harvard University, Massachusetts Institute of Technology and the Bureau of Standards. At Harvard University, Dr. Harvey N. Davis and Robert V. Kleinschmidt have conducted a series of experiments on the Joule-Thomson effect. At the Massachusetts Institute, Dr. F. G. Keyes has set up apparatus for determining the pressure-volume relations, while at the Bureau of Standards Dr. Nathan S. Osborne has constructed a calorimeter in which measurements of heat content were made. A high degree of precision resulted from the carefully constructed apparatus and thoroughly scientific techniques employed in all these investigations. Dr. Davis's work was completed first, and from his data and under his supervision Joseph H. Keenan, then an engineer with the General Electric Company, undertook the computation of the values for a complete set of steam tables and Mollier (enthalpy-entropy) diagram. This work culminated in the Keenan "Steam Tables and Mollier Diagram" published in 1930 by The American Society of Mechanical Engineers.

Throughout these investigations, annual public meetings of the Special Research Committee on the Thermal Properties of Steam were held under the auspices of the American Society of Mechanical Engineers and the results were reported year by year in *Mechanical Engineering*. In July, 1929, the first International Steam Table Conference was held in London, with representatives from all the countries in which scientific work on the properties of steam were under way. Tangible results of the conference were the definition, for its own use, of the international kilowatt hour as being equal to 860 international kilocalories, and a skeleton table with tolerances to which all investigators agreed. At the second International Conference, held in Berlin, in June, 1930, the tolerances were narrowed as a result of the experimental work which had been done since the first conference. It is expected that the third conference, to be held this September, will result in even narrower tolerances.

The official delegates representing Great Britain at the conference will be G. S. Callendar and A. C. G. Egerton, of the University of Oxford, and H. L. Guy, chief engineer of the Mechanical Engineering Department of Metropolitan-Vickers Electrical Company, Manchester. The German delegates will be Professor Dr.-Ing. W. Hausen, Technische Hochschule, Munich; Professor Dr.-Ing. F. Henning, Physikalisch Technisch Reichsanstalt, Charlottenburg; Dr.-Ing. W. Koch, Technische Hochschule, Munich; Dr.-Ing. E. Michel, Swarthmore, Pa., and Professor Dr.-Ing. E. Schmidt, Technische Hochschule, Danzig-Langfuhr.

Geo. A. Orrok, of New York, is chairman of the committee in charge of the arrangements for the conference, and Alex Dow, president, Detroit Edison Company, is chairman of the American Society of Mechanical Engineers' Special Research Committee on the Thermal Properties of Steam.

VISITING ASTRONOMERS AT THE MOUNT WILSON OBSERVATORY

The Christian Science Monitor publishes a statement concerning astronomers from other observatories who have been working at the Mount Wilson Observatory of the Carnegie Institution during the present summer. As corrected for SCIENCE at the observatory this list reads:

Dr. Joel Stebbins, of the University of Wisconsin, with a photoelectric cell, observed stars in the region of the Milky Way to find whether their coloring is due to dust clouds in interstellar space.

Using a lens of his own design and the 10-inch telescope, Dr. F. E. Ross, of the Yerkes Observatory, University of Chicago, photographed the Milky Way in sections. Later he will piece his photographs together in a map.

Dr. Fred E. Wright, geophysicist of the Carnegie Institution, Washington, was engaged in making a globular photographic map of the moon.

Dr. John C. Duncan, of Wellesley College, photographed nebulae.

Dr. Samuel A. Mitchell, University of Virginia, observed the faint variable stars and compared them with the neighboring ordinary stars.

Dr. J. C. Boyce, the Massachusetts Institute of Technology, investigated elements known to be present in the sun and stars and searched for others.

Dr. Charles G. Abbot and L. B. Aldrich, of the Smithsonian Institution, made measurements of the sun's radiation and of the energy of some of the hotter stars.

Dr. Oliver J. Lee, Northwestern University, made observations of the spectra of stars.

Dr. C. M. Huffer, University of Wisconsin, made studies with the photoelectric cell.

Dr. and Mrs. Gaposchin, astronomers of Harvard University, studied the spectra of novae, stars which suddenly flare to great brilliance.

SCIENTIFIC NOTES AND NEWS

DR. ALBERT T. POFFENBERGER, professor of psychology and executive head of the department of psychology at Columbia University, was elected president of the American Psychological Association at the meeting held in New York from September 5 to 8. Dr. J. E. Anderson, of the University of Minnesota, and Dr. E. S. Robinson, of Yale University, were elected directors.

PROFESSOR EMIL ABDERHALDEN, director of the Physiological Institute of the University at Halle, has been elected a corresponding foreign member of the Vienna Academy of Sciences.

THE Guyot Prize for the best work in otology during the last five years has been awarded to Professor F. R. Nager, of Zurich, and to Professor Max Meyer, of Wurzburg.

THE new amphitheater of the New York State Fair has been named in honor of Henry Hiram Wing, for forty years professor of animal husbandry at Cornell University, in recognition of the distinguished service which he for many years gave to the dairy industry and the science of animal husbandry. At the ceremony of dedication, which took place on September 4, Owen D. Young made the presentation address and Dr. Frank P. Graves, president of the University of the State of New York, who was master of ceremonies, unveiled a bronze plaque commemorating the occasion. Professor Wing spoke in acknowledgment.

ASSOCIATE CURATOR PAUL C. STANDLEY, of the department of botany of the Field Museum, Chicago, has been invited to act as vice-president of the section for taxonomy and nomenclature of the sixth International Botanical Congress, to be held at Amsterdam in September, 1935.

FOR the fourth consecutive year, Dr. Henry L. Banzhaf, dean of the Marquette University Dental School, has been chosen president of the Dental Educational Council of America. Dr. Banzhaf is a past president of the American Dental Association.

THE Earl of Malmesbury has been elected president of the Health Congress of the Royal Sanitary Institute, which is to be held at Bournemouth, England, from July 15 to 20, 1935.

THE retirement is announced of Professor Horatio Scott Carslaw, for thirty-two years professor of pure and applied mathematics at the University of Sydney.

DR. VERNON C. DAVID, since 1929 clinical professor