SCIENTIFIC EVENTS

ARCHEOLOGICAL WORK OF THE UNIVERSITY OF NEBRASKA FOR 1938

THE field season of the Archeological Survey of the University of Nebraska was drawn to a close the first part of December. Through the cooperation of the Works Progress Administration work was conducted on a much larger scale than previously.

Three parties were in the field. One party, at O'Neill, excavated a group of eleven mounds containing both cremated and bundle burials, with pottery of the "Woodland" type and stemmed projectile points. After completing the work at O'Neill the party moved to a site south of Lynch, at the mouth of Redbird Creek, a tributary of the Niobrara. The site consisted of house pits, of the circular type, with pottery and artifacts almost identical to those found in a previous year at a historic Ponca village near Verdel. One unique characteristic of the pottery is tempering of burned and crushed bone. A preliminary report on Ponca archeology will be available next spring.

Another party worked at Stanton, near the Elkhorn River. This site consisted of circular house pits with artifacts similar to those of the Oneota culture and a profuse amount of European trade goods. No documentation in reference to this site has yet been found. We request the aid of experts to identify and date trade beads, porcelain ware, glass bottles and gun parts found in this site. After completion of this site the party worked in one of the many nearby Upper Republican sites.

A third party, at Ponca, first excavated a new focus of the Nebraska culture, and then moved to a "Woodland" site in the same locality. The site was in an old terrace remnant and consisted of three distinct culture strata separated by 32″ and 24″, respectively, of sterile soil. While the pottery of all the strata was of the "Woodland" type it showed a distinct evolution from a thick, crude ware at the bottom, to a fine, thin and well-finished ware at the top. The day that the project was closed a fourth stratum was located. Work on this important site will be continued next year.

EARL H. BELL

NATIONAL PARKS

IN connection with the proposal to make the Kings River Canyon of California a national park, Secretary of the Interior Ickes has made public a statement in which it is recommended that Congress establish and set standards for wilderness national parks, in which roads would be limited by law and from which hotels would be excluded. The statement follows:

In 1935 I issued a statement of policy, declaring the purpose of the department, if this national park is authorized by Congress, to treat it as a primitive wilderness, limiting roads to the absolute minimum, maintaining foot and horse trails, excluding elaborate hotels, admitting all responsible packers, promoting good fishing, endeavoring to restore such nearly vanished wild life as the Sierra bighorn, the southern wolverine and the Pacific fisher; also to respect all valid existing equities, make every effort to conserve the watershed and recreational values of the region, and seek boundaries which will attain these ends without infringing upon the future development of the Kings River, for water storage, power and other uses, necessary to the welfare of the people of the San Joaquin Valley.

These principles of administration I wish to reaffirm. Since 1935, the Olympic National Park has been established and most of the lands have been acquired for the authorized Isle Royale National Park. Both will be maintained as wilderness areas. The problems of administration arising in connection therewith, and the questions arising in connection with the proposed Kings Canyon National Park, point to the need for a greater stability of policy than can be insured by administrative orders. Areas dedicated as wilderness national parks should be protected forever by provisions of law designed for that purpose, this in addition to the protection all national parks receive by law against commercial activities.

I shall welcome it if the Congress of the United States will define and set standards for wilderness national parks, as well as provide for wilderness areas to be proclaimed and similarly protected by law in other national parks. I suggest the following statutory safeguards for the Kings Canyon National Park if and when it is established:

1. Prohibit by law the building of any roads or truck trails in the park, except on the floor of the valley of the South Fork of the Kings River, below its junction with Roaring River.
2. Require that all buildings in the park shall be erected with government funds.
3. Exclude all public housing structures, except trailside shelters, from the park, except in the valley of the South Fork of the Kings River below Roaring River, allowing in that area simple cabins which may be rented to visitors, but not leased.
4. Permit public and private packers to use the park without discrimination, subject to general regulations.
5. On account of the relative absence of automobile roads, provide that the existing Sequoia-General Grant automobile fee shall admit to Kings Canyon.

By these policies, written into law, the Kings River wilderness can be maintained forever in its present grandeur, and dedicated to recreational use consistent with its wilderness aspect.

THE ANNUAL REPORT OF THE DIRECTOR OF THE NEW YORK BOTANICAL GARDEN

DR. WILLIAM J. ROBBINS, director of the New York Botanical Garden, in his first annual report calls spe-

cial attention to the completion of the reconstruction of the main observatory, the establishment of a new laboratory for the study of vitamins and their functioning in the growth of plants, and the addition of more than 45,000 specimens to the herbarium among the achievements of 1938.

Figures collected in various departments indicate that the public had made greater use of the garden in the past year than at any time in recent years. Record crowds have visited the plantings both outdoors and in the newly reopened conservatory, and more people than usual have registered for gardening courses and attended the free Saturday lectures. On a single holiday, for example, 8,500 people viewed the perennial border, while 2,000 strolled through the Thompson Memorial Rock Garden, many of them taking notes on the plants which especially interested them, and on the same day, 2,500 persons walked through the three houses which were then open in the conservatory, examining the collection of cacti and other succulents.

For next year's displays, 2,500 tulips have been planted in the conservatory court, and 7,600 biennials are being raised for later bedding effects there. One hundred new varieties of iris in bearded, bulbous, Japanese and Siberian types, besides 15 natural species, totaling nearly 2,000 plants, are being added. During the past year, the Thompson Memorial Rock Garden has been enriched by 1,300 plants which were propagated by the garden, plus 450 received from other sources. Five thousand new bulbs have been planted there for an additional spring display. In the glade 300 lilies and 150 other plants have been set out for naturalizing. These plantings mark the beginning of the flowering meadow being created there. East of the rock garden, in the woods, a native flower area is being developed, and to this 500 plants were added during the year.

The department of plant pathology, under Dr. B. O. Dodge, has succeeded during the past year in reducing the infections of the Japanese beetle, the gipsy moth and the Dutch elm disease at the garden. Other scientific work includes work in genetics being done under the direction of Dr. A. B. Stout, including the development, in collaboration with the New York Agricultural Experiment Station at Geneva, of hardy seedless grapes for the northeastern states. The work on vitamins and plant growth is being directed by Dr. Robbins himself.

The herbarium, which now numbers 1,933,506 specimens, has been used during the past year by visiting botanists from thirty-four institutions in this country and abroad. In addition, collections of plants have been identified for botanists in eleven foreign countries and thirteen states, and loans have been made for study to the extent of nearly 15,000 specimens, sent to institutions in twenty-one states and seven foreign countries.

The library, under Miss Elizabeth Hall, with Dr. J. H. Barnhart as bibliographer, has been consulted this year by botanists and horticulturists from more than thirty states, territories and possessions and from nineteen foreign countries representing every continent. In addition, students from more than a hundred schools, colleges and institutions have used the library during the year, some for only a day but others for several weeks or longer.

Officers of the New York Botanical Garden, all of whom were reelected at the annual meeting, are Joseph R. Swan, *president;* Henry de Forest Baldwin and John L. Merrill, *vice-presidents;* Henry de la Montagne, *secretary;* and Arthur M. Anderson, *treasurer.* Mrs. Harold I. Pratt was elected to the board on January 12. Dr. E. C. Auchter, chief of the U. S. Bureau of Plant Industry, became a member just before the close of the year.

A CENTER FOR MATHEMATICAL ANALYSIS AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

THE establishment of a center of mathematical analysis to direct the use of new types of calculating machines at the Massachusetts Institute of Technology has been made possible by a grant of $45,000 by the Carnegie Corporation of New York.

The center of mathematical analysis is being founded primarily for the purpose of encouraging and assisting technological advance in all fields by making available to scientific institutions and industry the means of carrying out intricate mathematical processes economically. The center will also carry out an active development program on new machines and the analytic methods of using them.

Recommended by the Committee on Scientific Aids to Learning of the National Research Council, the project includes the organization of a staff to operate the various machines developed at the institute. The program is to be centered in the department of electrical engineering in the new Rogers Building under the direction of Professor S. H. Caldwell.

As the scope of science and engineering has been developed and extended, the problems arising have increased in complexity and the associated mathematical labor has grown proportionately. Ordinary methods of analysis have either failed completely to keep up with this development or have given results only at the expense of much tedious routine computation. By means of the more recently developed types of machines, direct attack on problems is frequently possible and the routine labor is eliminated.

Equipment which will be available for use through