

phate mining camp some forty air-line miles west of Gafsa. That area lies in the once well-watered triangle of some twenty-five kilometers along its base on the Southern border fixed by the three barren mountains, Bliji, Chouabine and Alima, with Redeyef close to that base line near its middle. Professor Jenks was fortunately able to purchase the collection of M. Louis Gaillot, of Redeyef, gathered over a period of twenty-five years, which played an important part in M. Gobert's studies of that North African culture ranging well throughout the time and type of the Aurignacian stage of culture in Europe. That collection, together with the entire Debruge collection of artifacts, of animal bones, and of seven human crania—including the Mechta el Arbi type-skull, and the abundant materials resulting from Minnesota digging and surface find far afield in 1930—enable the University of Minnesota to contribute an important part to the ever-growing source-material of prehistory available for students in America.

July and August were spent digging in France and Czecho-Slovakia. In France, Professor Jenks was with Dr. Henri Martin at his famous Mousterian site at La Quina and there dug and from there brought back an extensive and excellent collection of flint and bone implements and more than 100 pieces of animal bone which show the marks of the flint tools of Neanderthal man. The time spent in Czecho-Slovakia was largely in the nature of a reconnaissance, but fruitful digging was done as arranged by the Zemská Museum of Brno. In the vicinity of Znojmo, Neolithic-age, Bronze-age and Hallstad-iron age sites were dug and small amounts of typical cultural materials were thus secured and exported. Besides a considerable collection of identified prehistoric materials were purchased in Moravia.

Mr. Wilford, assistant to Professor Jenks, returned to the University of Minnesota the middle of June. During the summer he continued archeological work at the Minnesota Mimbres site on the Galaz ranch in southwestern New Mexico. A small amount of excavation was also undertaken in the Upper Gila culture (bordering the Mimbres on the north) and in the Chihuahua culture (bordering Mimbres on the south.)

The archeological program at the University of Minnesota is made possible over a term of years through the gift of money by interested citizens of Minneapolis. The Minneapolis Institute of Arts, as well as the University of Minnesota, shares in the materials acquired by research and purchase.

WORK OF THE SMITHSONIAN INSTITUTION

In his annual report presented to the regents of the Smithsonian Institution, Secretary Charles G. Abbot lists a number of important achievements in

the "increase of knowledge" and one material event which is certain to make possible a greater number of such achievements in future years.

That event is the authorization by Congress of an appropriation to add wings to the natural history building of the National Museum at a cost of \$6,500,000. This will mean, besides increased exhibition space, many new laboratories for the preservation and study of the collections.

Of the achievements reported by Dr. Abbot is the discovery by the Astrophysical Observatory of an apparently considerable influence of short period solar variation on the temperature of the United States. That is, an average change of 0.8 per cent. in the sun appears to cause a temperature change of the order of 5° Fahrenheit in Washington. "Although this relation is complicated," says Dr. Abbot, "it offers promise of weather forecasting nearly a week in advance."

The institution's new division of radiation and organisms has made rapid progress in the construction of laboratories for physical, chemical and biological investigations. In an experiment on the amount of bending of plants towards light of various wave lengths, it was found that red or infra-red light produced no bending of the plant; that yellow light produced a small bending; that green light was one thousand times more effective than yellow; and that blue light was thirty thousand times more effective than yellow.

During the year the Smithsonian brought to a conclusion its support, which has lasted twelve years, of Dr. R. H. Goddard's experiments in designing and building a rocket to explore the unknown upper layers of the atmosphere.

Dr. Goddard's experiments are now going on in New Mexico under a gift from the late Simon Guggenheim. "It is a pleasure to record here," says the report, "that the Smithsonian has again been able to support during its more or less uncertain pioneering stages an investigation of great promise for the increase of knowledge."

In the natural sciences twenty-eight major expeditions were sent out during the year to widely scattered regions. These included expeditions to remote Eskimo and Indian tribes in Alaska by Dr. Aleš Hrdlička and Mr. Henry B. Collins, Jr.; an extended botanical exploring trip along the Amazon in Peru and Brazil by Mr. Ellsworth P. Killip; intensive collecting of mollusks in the West Indies by Dr. Paul Bartsch; as well as anthropological, biological and geological expeditions to Africa, Spain, the Philippines, China, Siam, and many parts of this continent.

The Bureau of American Ethnology excavated Indian sites in Florida and Arizona, carried on field

work among the Choctaws of Mississippi and the Creeks of Oklahoma, the San Juan tribe of California and the Iroquois of New York State and Canada. Indian music of ten different tribes was collected and much work was done in the preparation of dictionaries and grammars of various Indian languages.

The National Zoological Park during the year began the construction of a new reptile house authorized by Congress. This will permit the National Zoological Park to exhibit for the first time an adequate representation of the cold-blooded vertebrates. The collection at the close of the year numbered 2,000 animals including several species not shown in any other American zoo.

The National Gallery of Art held many exhibits during the year including one of the seventy-eight American paintings purchased during the last ten years from the Ranger fund. The Freer Gallery of Art has added a valuable variety of objects of art from countries stretching from Egypt to China.

The International Exchange Service continues its task of distributing governmental, scientific and literary publications from this country to governments and learned societies abroad, and from abroad to learned societies in this country.

THE COMMITTEE OF ONE HUNDRED AT CLEVELAND

A GENERAL meeting of the Committee of One Hundred on Scientific Research of the American Association for the Advancement of Science will be held at the Cleveland meeting to listen to reports of committees and to consider the future course of its work. The committee has concerned itself, among other things, with the conditions of the researcher as influential in the progress of research and has found in the economic status of the researcher one important condition. One suggestion for the future work of the committee proposes the careful study of a large number of American colleges and universities from these standpoints: salary adequacy, opportunity for and policy toward supplementary earnings, adequate provision for retirement, teaching load, support of research through financial support or through systematic time grants. With the information thus gained, it is suggested that institutions might be grouped into classes representing different grades of policy and of accomplishment. Such a survey would bring out institutions having promise for able researchers and those having less.

This discussion is likely to be very interesting and important. The committee will meet in the Statler Hotel at 2:30 P. M. on Tuesday, December 30.

RODNEY H. TRUE,
Secretary, Committee of One Hundred

STATISTICS OF UNIVERSITY REGISTRATION

ATTENDANCE at American colleges and universities showed an upward trend this year. The annual study of Raymond Walters, dean of Swarthmore College, published in the issue of *School and Society* for December 13, shows that the trend exceeded that of the last several years and approached the percentage increase of the post-war period.

Reports from 431 institutions of all types in every state in the Union show totals for November 1 of 578,111 full-time students, an increase of 3½ per cent. over the full-time totals on November 1, 1929. The grand total attendance, including part-time students and the summer session of 1930, is 871,184.

For full-time students the order is presented by Dean Walters as follows:

California (including the university at Berkeley and at Los Angeles), 17,322; Columbia, 14,958; Illinois, 12,709; Minnesota, 12,490; New York University, 12,147; Ohio State, 10,709; Michigan, 9,431; Wisconsin, 9,401; Harvard, 8,446; University of Washington (Seattle), 7,368; University of Pennsylvania, 7,252; Pittsburgh, 7,098; Northwestern, 6,184; Texas, 5,970; Nebraska, 5,795; Cornell, 5,725; Chicago, 5,679; Boston University, 5,606; College of the City of New York, 5,312; Yale, 5,259; Oklahoma, 5,210; University of Iowa, 4,860; Temple University, 4,736; Hunter College, 4,614; Cincinnati, 4,537.

Ranked as to grand totals, including part-time and summer students, three New York City institutions lead and another stands sixth. The grand total follows:

Columbia, 33,144; New York University, 29,214; College of the City of New York, 24,752; California, 22,797; Minnesota, 18,505; Hunter, 15,447; Illinois, 14,169; Northwestern, 14,152; Pennsylvania, 13,828; Ohio State, 13,730; University of Southern California, 13,627; Pittsburgh, 13,515; Boston, 12,713; Western Reserve, 12,450; Chicago, 11,757; Michigan, 11,756; Cincinnati, 11,454; Harvard, 10,855; Wisconsin, 10,668; University of Washington (Seattle), 10,197; College of the City of Detroit, 9,342; Texas, 9,203; Nebraska, 8,993; Temple, 8,992; Fordham University, 8,781.

The nine largest liberal arts enrolments are:

California, 9,969; New York University, 5,480; Minnesota, 4,618; Michigan, 4,214; College of the City of New York, 3,884; Illinois, 3,800; Columbia, 3,450; Harvard, 3,239; Texas, 3,184.

Among medical schools those having the largest enrolment are:

Northwestern, 740; Pennsylvania, 663; Minnesota, 659; Illinois, 576; Michigan, 573; Chicago, 546; Harvard, 517; Indiana, 439; Columbia, 430; Ohio State, 343.