picturesque, but now that the significance of its singular conformation has been pretty well worked out by the labors of E. C. Quereau, and more particularly by Professor H. L. Fairchild, it constitutes a very extraordinary, if not unique, geological record.

In the course of Professor Fairchild's work upon the Pleistocene geology of New York state, he demonstrated very clearly and in detail the accuracy of Mr. Quereau's suggestion that in the retreat of the ice mantle the outflow of the glacial waters was by way of tremendous rivers moving eastward into the Mohawk-Hudson drainage, and here one of these streams cut its rock gorge in the limestones of the Helderberg escarpment and left a series of plunge-basins beneath great cataracts which surpassed the dimensions, as they must have equalled the dignity and grandeur, of Niagara.

The Green Lake or Jamesville Lake, which lies on the property now thus reserved, is surrounded on all but its eastern side by an amphitheater of sheer limestone cliffs rising to a height of nearly 200 feet, and the depth of the lake is stated by the former owner of the property to be not less than 100 feet. While water still fills this ancient plunge-basin, it is water of a deep emerald hue, without visible outlet or inlet. Westward of this escarpment is a smaller and dry plunge-basin with its abandoned cataract cliff and with rocky channels connecting it with the larger basin, and from the Green Lake eastward is the old open discharge into the other stream courses and cataracts lying beyond Jamesville in the vicinity of Fayetteville.

Aside from the extraordinarily clear and wonderfully effective geological record displayed in this place, the spot has additional scientific interest as its rocks are the resort of many rare ferns and flowering plants which have long attracted the botanist.

The menace of commerce, expressed in the ever-increasing demand for the conversion of limestone into cement, threatened this wonderful spot, and the intervention of the donor, who saved it from destruction, is a particularly gracious act inasmuch as it conserves a place of high scientific and educational interest.

The property is given to the regents of the university for the State Museum by Mrs. Mary Clark Thompson, of New York, and presented in the name of her father, Myron H. Clark, a former governor of that state, and by her desire it is to be known as the "Clark Reservation."

It may be added that this reservation lies about four miles to the southeast of Syracuse on the Seneca Turnpike, a new state road, and is also easily accessible from Jamesville which can be reached from Syracuse by trolley.

JOHN M. CLARKE

ALBANY, N. Y.,
March 3, 1915

THE UNITED STATES GEOLOGICAL SURVEY AT THE PANAMA EXPOSITION

THE exhibit occupies a space 62 by 78 feet in the Palace of Mines and Metallurgy, flanked on one side by the exhibit of the Bureau of Mines and on another by the Alaskan exhibit, for which also the survey has been in a measure responsible. The central feature of the exhibit is a booth, containing stage-like settings of a scene, partly modeled and partly painted. The first represents an undeveloped district in the arid west being studied by the survey. Topographers are at work with their instruments on the headlands; geologists have stripped a bed of coal and are taking a sample for analysis; and other geologists are studying the rocks. In the foreground is an automatic gage beside the river that comes out of the picture toward the observer. Farther back, a stream gager is measuring the stream. In the background is a camp and pack train. The second scene shows the same district after development. The results of the stream gaging have been utilized in planning a power plant that shows in the distance and an irrigation project that covers the valley floor. The coal bed is being mined on one side; an oil field is under development elsewhere; a sandstone bed is being quarried in the foreground; mining and milling are in progress in the mountains; a town has been built, and roads, railroads, and other evidences of civilization abound.

Behind the scenes, in the same booth but

facing the ends, are recessed screens, on one of which are shown pictures illustrating the different kinds of survey work and the part they play in the development of the country. On the other screen are shown several series of pictures.

At one end of the space is shown the per capita production of minerals in the United States in 1880, about the time of the Centennial Exposition, and of the organization of the survey, and in 1913, the period between these dates practically covering the past work of the United States Geological Survey. The exhibit consists of one 97-millionth of the actual production of each mineral in 1913 and one 48-millionth of the production in 1880.

The space along one of the outside aisles is devoted to a series of cases, illustrating what our common things are made of, what the raw material looks like as it is obtained from the earth, and where it occurs in the United States. For example, many of the familiar household articles are there, such as an albuminum saucepan, an electric-bulb filament, and a fountain-pen point; and above each article is shown the mineral from which it is made, traced back to the ore, and then a map of the United States, showing where the ores occur. Most of these individual maps have been prepared especially for this exhibit.

At the west end of the space is an exhibit of the power and fuel resources of the United States, including maps showing the distribution of the black shale from which oil is derived and the apparatus used in the field in determining the shales that are worth studying.

In order to show the transparencies included in the exhibit to the best advantage, arcades resembling mine entrances have been built at the corners of the space. The methods of work in the survey are illustrated by a series of cases showing by a set of partial results how maps are made and other features of the work.

In the portion of the exhibit relating to water resources is a display of automatic gages being run by clock work and recording the fluctuating height of water in a tank.

One feature of the exhibit is the stereoscopic pictures, resembling the old mutoscope views but of a modernized type. These will be arranged in boxes of fifty each on a table at which one may sit and study leisurely various features of survey work. There are also shown four series of pictures of the Grand Canyon and Rocky Mountain region, taken in the early days of the geological survey by the famous photographers Jackson and Hillers.

Other cases show the gem minerals, the rare mineral ores, etc.

SCIENTIFIC NOTES AND NEWS

Col. George W. Goethals has been made a major-general of the line in recognition of his services in building the Panama Canal. Brig.-Gen. William C. Gorgas, surgeon-general, has been made major-general in the medical department. Col. Harry F. Hodges and Lieut.-Col. William L. Sibert, United States Corps of Engineers, have been promoted to be brigadier-generals. The bill providing for their promotions extended the thanks of congress to the officers.

Under the leadership of Dr. Hiram Bingham, the National Geographic Society-Yale University Peruvian Expedition sailed from New York on March 3 to continue its work in the Andean Mountains. Members who left New York on this expedition are: Director, Hiram Bingham, Yale University; geologist, Herbert E. Gregory, Ph.D., Silliman professor of geology in Yale University, geologist of the 1912 expedition; naturalist, Edmund Heller, naturalist of the Smithsonian's African expedition, under the leadership of Colonel Roosevelt; botanist, O. F. Cook, Ph.D., of the United States Department of Agriculture; chief engineer, Ellwood C. Erdis, of the 1912 expedition; topographer, Edwin L. Anderson; chief assistant and interpreter, Osgood Hardy, M.A., of the 1912 expedition; assistant topographer, C. F. Westerberg, B.S., and several assistants.

Miss Katharine Lilly, head nurse of the department of surgery of the Rockefeller Institute for Medical Research, has gone to