Their lives are still devoted to sound learning and sane living.

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SCIENTIFIC EVENTS

EXHIBIT OF MINERALS IN ULTRA-VIOLET LIGHT

THE London *Times* reports that by means of a mercury vapor lamp, which has been installed in the Mineral Gallery of the British Museum (Natural History), Cromwell Road, members of the public, by pressing an electric button, can flood a case containing fluorescent minerals with invisible ultra-violet light and see the remarkable phenomenon which results.

Most of these minerals are practically colorless, but as soon as they are exposed to ultra-violet light they absorb this invisible light and emit in their stead visible rays of longer wave-length. Fluorspar, a brown mineral, changes color, and becomes a bright violet. Colorless quinine shows up bright sky-blue, zinc-silicate becomes green, and in some cases yellow; zinc-blende is changed to a shining mass, old-gold in color, and in some cases a brilliant fiery yellow, like a live coal. A pale-green slab of willemite glows with remarkable brilliance, the color being comparable with uranium-green. Another specimen, with grains of pale-green willemite embedded in a cleavage-mass of white calcite, is changed to dark flesh-red color, in which are spots of brilliant green, due to the willemite.

The installation of this ultra-violet light in the museum has been carried out more with the idea of providing a novelty show-case than for scientific purposes. The principle of the use of ultra-violet rays in the detecting of certain minerals, however, is being explored by Dr. L. J. Spencer, keeper of minerals in the museum.

It has already been discovered that the rays show similar effects on a variety of oils and certain papers, and there is a possibility that practical use may be made of these phenomena. In a statement yesterday, Dr. Spencer said that during a visit to the mineral locality of Franklin Furnace, New Jersey, he saw a simple arrangement used by the New Jersey Zinc Company for the quick detection of willemite. This was done by making use of the ultra-violet rays emitted from a high-tension spark. It occurred to him that this might prove a simple means of detecting willemite in Rhodesia, where there were large quantities, but he found, on experiment, that willemite did not always glow when placed under ultra-violet light. It became evident from the tests he carried out that fluorescence in ultra-violet rays was not a constant and essential character of any mineral species.

In spite of this difficulty, Dr. Spencer was of the opinion that ultra-violet rays might prove of practical use in a variety of respects in the detection of minerals. He thought that it might be used underground for the rapid detection of certain ores. It could also be used to detect forged bank notes or postage stamps, as different qualities of paper glowed different colors when exposed to the rays. It could be used in the cement industry for the detecting of the valuable "slag" from the waste heaps of iron furnaces. The slag which was suitable for the manufacture of cement or for road-making glowed a purple tint, while the valueless slag became green.

MUSEUMS IN THE NATIONAL PARKS

OPPORTUNITIES to combine educational advantages with a pleasurable vacation are being forwarded by the National Park Service of the Department of the Interior in cooperation with leading educational organizations of the country.

During the past summer the Secretary of the Interior requested a number of prominent educators to make a thorough study of and report on the educational possibilities of the national parks. Funds to cover the expenses of the investigators were provided by interested organizations which have taken a keen interest in the development of the educational and museum work in the parks. Drs. John C. Merriam, Hermon C. Bumpus, Frank R. Oastler, Vernon Kellogg and Harold C. Bryant accepted the secretary's invitation to make this educational survey, and during the summer field inspections were made of the major national parks. Definite recommendations based upon their field studies will be made by the investigators later in the year.

Study of museum conditions in the national parks by a committee of the American Association of Museums led to that organization securing a grant of $118,000 for the construction of museums in Yellowstone National Park, the funds to be expended under a committee composed of Dr. Hermon C. Bumpus, of the American Association of Museums; Dr. Frank R. Oastler and Superintendent Horace M. Albright, of the park. Plans include the construction of a new museum in the headquarters group at Mammoth Hot Springs, a branch museum and auditorium at Old Faithful, several smaller buildings, some exhibits in place, and other features of permanent educational value. Construction has already been started on the Old Faithful Museum, which is expected to be ready for service during the season of 1929.

Of importance in the educational world was the completion of the trailside museum and observation station at Yavapai Point in the Grand Canyon National Park. This was formally opened to the public

on July 17 by Dr. Merriam. The structure was built and equipped through the cooperation of a number of educational organizations, among which were the Carnegie Institution of Washington, the Laura Spelman Rockefeller Memorial, the American Association of Museums and the National Academy of Sciences. Constructed of native weathered stone and logs, the station harmonizes with the landscape features and seems almost to be an integral part of the canyon walls.

The importance of establishing libraries in the national parks, both in connection with the educational work and for the use of the public generally, was established by the use of the library maintained in connection with the Yosemite Museum. Based on this, the American Association of Museums interested the American Library Association to such an extent that a committee was appointed to establish libraries in the national parks.

SERVICE OF THE WEATHER BUREAU TO AVIATION

METEOROLOGY in aid of aviation and marine meteorology—two of the many activities of the Weather Bureau of the U. S. Department of Agriculture—are discussed by Dr. C. F. Marvin, chief of the bureau, in his annual report. He says:

> Since 1926 funds have been included in the regular appropriations of the department for assigning and maintaining on duty at every important airport one or more skilled meteorologists, whose duties require them to receive from the central organization of the Weather Bureau the fullest possible advices, reports, observations, etc., including forecasts and warnings, and to pass these on to pilots of airplanes at the time of and in accordance with the flight immediately in contemplation.
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> The basis of advices and warnings to pilots is necessarily derived from the great network of meteorological stations that has been built up by the Weather Bureau throughout past years. In some cases these stations are rather widely distributed. Moreover, observations are made regularly only at 8 A. M. and 8 P. M. For the needs of aeronautics, more intensive and special stations are required, especially in certain regions. To make provisions for this 137 ground stations have been established at frequent intervals all along the airways set up by the Department of Commerce, and the whole machinery of operation is gradually being improved to make the service more and more effective.
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> There is a growing demand for four daily observations from meteorological stations over the entire globe, instead of two. The hours for these observations are quite likely to be advanced in the near future in the United States so as to occur at 1 and 7 A. M. and at 1 and 7 P. M.
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> A few years ago the entire scheme for collecting by telegraph the meteorological reports from field stations was reorganized. A new and more flexible system is now in operation.
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> In no other field has the demand for meteorological help for aviation been more pressing than in connection with transoceanic air navigation. Agreements are under way with other great maritime nations for better organizing ocean meteorological observations by the selection of a certain number of ships of each nationality which shall uniformly make and distribute radio observations twice, or perhaps four times a day while on the high seas. . . . The highest efficiency and accuracy in formulating weather forecasts and warnings is only attainable when the meteorologist has before him a complete picture of the weather conditions over the whole surface of the globe, or at least over the whole surface of the Northern or Southern Hemisphere. The development of an international meteorological oceanic service along these lines is perhaps the most urgent technical problem concerning meteorology at the present time.

EPILEPSY COMMISSION OF THE HARVARD MEDICAL SCHOOL

A CITY-WIDE campaign against epilepsy has just been launched by the Harvard Medical School with the appointment of an Epilepsy Commission. Funds are now being collected by the commission, and research and experiment will be begun shortly at the Medical School and at various Boston hospitals in an investigation of a disease which now has 390,000 victims in the United States.

The commission, as appointed by the Corporation of Harvard University, contains the following members: Dr. Walter B. Cannon, Dr. Fritz B. Talbot, Dr. Bronson Crothers, Mr. Robert Amory, Dr. Stanley Cobb and Mr. Ralph Lowell. Mr. Charles Francis Adams is acting as treasurer for the commission in its drive for funds.

In a statement describing some of the "baffling problems" facing the commission in its campaign against epilepsy, Dr. Stanley Cobb, Bullard professor of neuropathology, writes as follows:

> This commission has been appointed to promote a continuous study of the convulsive disorders over a period of years. The term epilepsy is used for brevity, but it has been demonstrated in recent years that epilepsy is not a disease—it is a type of reaction of the human body to different abnormal stimulations; it has various causes. Thus the field of study must be broadened to include the convulsions of childhood, the eclampsia of pregnancy, uremia, asphyxia and other allied conditions. When these are all better understood there will be more chance of helping the chronic sufferer—the epileptic.
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> It is estimated that there are 390,000 epileptics in the United States. This represents an enormous amount of suffering, especially when one realizes that not only the patient suffers but the whole family, for the fear of a catastrophe is ever hanging over the household, coloring the lives of all. The common convulsions of childhood are less distressing but more common; one survey showed that 7 per cent. of children had had convulsions before