seek out just what conditions would make the outrage seem permissible and reasonable.

Let me close this address by explaining to this hospitable and sympathetic conclave why it seems peculiarly appropriate for me, an easterner, to set before the westerners here gathered the particular outrage with which I have detained them. It is because my contacts with the geology of the Pacific slope during the winter of 1924–25—very unconformable contacts, because of my preconceptions—have been outraging the views that I have more or less unconsciously gained on the Atlantic slope as to the demure quietude of the later geological periods. In the east, the Miocene, Pliocene and Pleistocene have witnessed only leisurely processes of degradation, deposition and deformation, all of small relatively measure; but here on the Pacific slope those periods have been characterized by an extraordinary activity; deposits of enormous thickness have been laid down, and those deposits have been deformed and eroded on a scale that is really rather disconcerting. Is it not fair, therefore, that in return for the incredible stories that have been told me here as to what has happened lately in Californian geology, I should take a turn at telling some outrageously impossible stories myself? In any case, there stand the Basin Range fault blocks, just beyond the eastern skyline of California, displaced in such a manner as to extend over a greater breadth of country than that which they previously occupied; and if it is not possible to explain their extension by underdrag, as an indirect reaction of a passive exterior crust on an expanding earth interior, then we must ask by what other outrageous process it is proposed to explain them.

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OPPORTUNITIES FOR RESEARCH AT THE OCEANOGRAPHICAL INSTITUTE OF MONACO

THE original plan of Prince Albert I was to establish at Monaco a museum especially devoted to the collections made by him in the course of his scientific cruises, pursued each year from 1885 until the outbreak of the war. Later this plan was enlarged and the museum as it now exists is devoted in a general manner to all phases of oceanography. As a point of interest to its tourists who throng its Riviera each year it is second only to the Casino of Monte Carlo. The number of visitors has increased considerably in recent years and is now approaching one hundred thousand annually.

In addition to its popular interest as a museum and aquarium, attention should be called to its importance as an institution for original research and for its publication of both biological and physical oceanographical investigations.

Unfortunately, since the death of Prince Albert in 1922 the resources and activities of the institution have been somewhat curtailed. The successor of Prince Albert, not having the same interest in science as his father and not caring to assume the expense of maintenance of his father's steam yacht, the Hirondelle II, promptly sold it to an American moving picture corporation. Consequently, further data and material for research obtained by annual cruises are no longer supplied to the institute. The amount already on hand is, however, very great and is sufficient for many years' work. In accordance with an arrangement made by the prince before his death the publication of the results of his cruises is to be completed without cost to the institute. The seventieth volume is now in press and it is estimated that a total of about one hundred will be required for the complete publication. The rapidity with which the remaining volumes are issued will depend of course upon the rate at which work can be pursued, but that they will eventually appear seems without question.

In a letter addressed by Prince Albert I to the minister of public instruction of France, dated April 25, 1906, the foundation of the Oceanographic Institute is described in the following words:

> Having consecrated my life to the study of the oceanographical sciences I have recognized their importance to many facts of human activity, and I am prompted to secure for them the place they deserve in the solicitude of the government as well as in the consideration of scientists.
>
> Many countries have already sent scientific expeditions to all the seas of the world and these furnish to oceanography a solid basis for its development, but France, in spite of the special interest which the science of the sea holds for her, has not shown it the same interest, as it has other branches of science. However, I have given at Paris during several years lectures attended each time by a more numerous and attentive audience, for which public powers, in the person of President Loubet and members of the government, have by their presence exhibited a certain interest.
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> Accordingly, I have desired to fill a void by myself creating and establishing at Paris a center of oceanographical studies, closely connected with the laboratories and collections of the Oceanographical Museum of Monaco, where I have assembled for twenty years the results of my personal investigations and those of eminent collectors who have come to me from all countries of Europe.

In addition to the original four millions the prince left to the institute another million at the time of his death. The income derived from this foundation, together with that obtained from the admission fee of

seventy-five francs paid by each visitor to the museum, is divided between the institute at Paris and the museum at Monaco. The diminishing purchasing power of the franc makes it increasingly difficult to carry on the excellent work so well done on their part by the institute.

It is to be regretted that no part of the large profits derived from the Casino of Monte Carlo goes to the institute, and also that the present Prince of Monaco does not emulate the example of his father in contributing freely to its needs. Thus a period has been reached at which the rate of growth of this important institution has been temporarily diminished.

A detailed description of the museum at Monaco has been published by Dr. Charles Atwood Kofoid in a bulletin of the U. S. Bureau of Education (1910, No. 4, whole Number 440) entitled "The Biological Stations of Europe." Especial attention is given in this article to the facilities obtainable at the museum for research.

Although a fairly large number of students and scientists from various countries availed themselves of the hospitality and opportunities offered for weeks at Monaco before the war, there have been very few since that time. To those who may be interested it should be mentioned that the invitation to work at the museum still holds good and every possible aid will be furnished to competent investigators who may find it possible to come to Monaco. It is interesting to know that in addition to five well-equipped laboratories in which there are accommodations for from eight to ten visiting scientists, there are also four completely furnished lodging rooms located in the institute which are offered without charge to those who would prefer to be near their work. Excellent meals can easily be obtained in Monaco for less than one dollar per day. This should prove especially attractive to those of limited means who may desire to pursue studies in a European laboratory. It is evident that with the present rate of exchange and the special arrangements made by the steamship lines for the cheap transportation of students to Europe a sojourn of several months at Monaco might cost even less than a similar stay at a less well-equipped laboratory in the United States.

The collections of this museum embrace thousands of carefully preserved specimens for which accurate and detailed information in regard to their source is available. The museum operates a small steam yacht for collecting material for the aquaria, and by means of this vessel living specimens for research may be easily obtained. The museum possesses a well-equipped chemical laboratory in which studies of chemical nature may be pursued. The library is rich in publications pertaining to all branches of oceanography and is ample to permit all necessary searches of the literature.

The present staff consists of the director and some five scientists and fifteen mechanics, attendants and guards. It is unfortunate that the time of this staff is occupied for the most part with details of maintenance and editorial work in connection with the publications of the institute rather than with research. It is particularly for this reason that Dr. Richard would welcome scientists who desire to take advantage of the facilities offered by his institution. Any one who may be interested in working at the Oceanographical Museum of Monaco should write to M. le Dr. Jules Richard, Musée Oceanographique, Monaco (Principauté). They should state the problem which it is desired to pursue and the particular material or apparatus required.

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SCIENTIFIC EVENTS

AWARD OF FELLOWSHIPS BY THE CHARLES A. COFFIN FOUNDATION

FIVE persons—four graduate students and one still an undergraduate—have been awarded fellowships for the year 1926–1927, by the Charles A. Coffin Foundation. These fellowships, awarded for one year, will enable the recipients to undertake research work at institutions of their own choosing. In addition to awarding the five new fellowships, the committee granted one renewal, and appointed one alternate.

The Charles A. Coffin Foundation, by which these fellowships were granted, was established in 1922 in honor of the first president and chairman of the board of directors of the General Electric Company. The object of these fellowships is to give financial assistance to a carefully chosen group of research men who would be unable to carry on their work without financial assistance. A sum of $5,000 a year is devoted to this purpose.

The committee by which the awards are made is composed of three members, not connected with the General Electric Company. The three making this year's awards were: Dr. Michael I. Pupin, representing the American Institute of Electrical Engineers; Dr. George B. Pegram, representing the Society for the Promotion of Engineering Education; and Gano Dunn, representing the National Academy of Sciences.

The awards are as follows: Hubert N. Alyea, for research work at Yale and Princeton on the inhibition of chemical reactions, studied photochemically and thermally. Bernard D. Holbrook, for investigating some phase (not yet determined) of the general problem of the reactions between radiant energy and matter, as investigated by the cloud-expansion chamber. Thomas J. Killian, for work in thermionic currents from absorbed films and conduction