department. Funds to carry out this enterprise were raised by popular subscription among the pharmaceutical interests throughout the United States, Canada, Cuba, Hawaii and Porto Rico.

UNIVERSITY AND EDUCATIONAL NOTES

HARVARD UNIVERSITY and the University of Rochester will share jointly a bequest of $640,988 from the estate of Dr. Charles A. Dewey, of Rochester.

COLGATE UNIVERSITY and Vassar College are each to receive a half of the residuary estate of Miss Evelyn Colgate, who died last month. The estate probably will amount to $150,000. Other gifts to Colgate recently announced amount to $26,000.

FUNDS available from two estates will make possible the early construction of a new chemistry building at Washington and Jefferson College at a cost of more than a quarter of a million dollars.

DR. J. B. REYNOLDS, who has been president of the Ontario Agricultural College since 1920, has resigned. The vacancy has been filled by the appointment of Dr. G. I. Christie, formerly director of the Agricultural Experiment Station at Purdue University, Lafayette, Indiana.

DR. JOSEPH EUGENE ROWE has resigned his position as head of the department of mathematics and director of extension in the College of William and Mary to become president of the Clarkson Memorial Institute of Technology at Potsdam, N. Y.

DR. EDMUND W. SINNOTT, professor of botany and genetics at the Connecticut Agricultural College, has been appointed professor of botany and head of the botanical department at Barnard College, Columbia University, to succeed the late Dr. Herbert Maule Richards.

EMMETT REID DUNN, associate professor of zoology at Smith College, has been appointed professor of zoology at Haverford College.

PROFESSOR HARRY B. WEISER, head of the department of chemistry of Rice Institute, Texas, will give two courses of thirty lectures each in the field of colloid chemistry in the forthcoming summer session at Western Reserve University, beginning June 18.

DR. LOWELL J. REED, professor of vital statistics and biometry, the Johns Hopkins University School of Hygiene and Public Health, will give a course for public health workers at the summer session of the University of California, Berkeley, from July 2 to August 11.

DISCUSSION AND CORRESPONDENCE

SYEVERNAYA ZEMLYA (NORTHERN LAND)

PERHAPS it is time now to correct a small mistake of geographical nomenclature, which has appeared in the literature (chiefly newspaper articles) of different countries and threatens to become permanent through repeated use.

The writer refers to the names of the islands discovered in the Arctic Ocean, north of the Taimuir Peninsula, in 1913, by the Russian hydrographic expedition under Captain Vilkitski. They were christened by the expedition: Emperor Nicholas II Land, the name applied to the largest northern island, perhaps a double one; Tsarevich Alexei Island, located about thirty-five miles north of the Taimuir Peninsula; Dr. Starakodomski Island, a small one, located in the strait between two former islands, four miles off the Tsarevich Alexei Island.[1]

After the Russian revolution the names of these northern islands were changed by the new Russian Soviet Government, as were the names of many towns, streets, etc. The name Syevernaya Zemlya (Northern Land) has been applied now to the Emperor Nicholas II Land; the name of Maly Taimuir (Little Taimuir) to the Tsarevich Alexei Island. The name of Dr. Starakodomski Island has remained unchanged. These names one finds on the new map of the U. S. S. R., published in 1927 by the Commissariat of the Interior of the present Russian government. Only these names are used in Russian newspapers in articles dealing with different Arctic enterprises and in this or other way touching the islands under consideration. The idea of the name of Lenin Land as a substitute for the former name was also fostered in Russia, but abandoned by the Soviet government. In spite of that this name has found its way into newspapers outside of Russia, and one meets the Lenin Land, for example, in articles dealing with the recent Arctic travel of the "Italia" under General Nobile. Nicholas II Land and Lenin Land have been used as synonyms in No. 377C Sheet I of the *Daily Science News Bulletin*, issued by Science Service. However, this article, in its essential, is a translation of a German article which is, therefore, responsible for the use of the name of Lenin Land.

The writer will not go into consideration of the question as to how it would be permissible or at least reasonable, only on account of political reasons, to make the change of geographic names which have once appeared on maps. The Franz Joseph Land, for example, still keeps its imperial name, although Austria has become a republic. German geographers mostly

[1] "Arctic Pilot," Vol. I, third edition, 1918, p. 510. Compare also the English Admiralty chart No. 55, published in 1916.

still use the names of the Emperor Nicholas II Land and Tsarevich Alexei Island,[2] introduced by the hydrographic expedition in 1913.

Every change of geographic names must be authorized in some way, and their indiscriminate introduction should never happen. Therefore, there is no reason to introduce the name of Lenin Land against the decision of the most ardent admirers of the late Russian dictator.

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LESSONS FROM THE ST. FRANCIS DAM

THE disaster caused by failure of the St. Francis Dam, near Los Angeles, California, on March 12 and 13 of this year, will long be remembered. Within a brief interval of time hundreds of lives were lost, a fertile valley was reduced to a scene of desolation, and property valued at many millions of dollars was destroyed. The general attention aroused throughout the country was due not merely to the magnitude of the disaster, but also to its unusual character. There have been few failures of large dams; and the collapse of the St. Francis structure, which was new and built of massive concrete, astonished engineers and laymen alike.

With commendable promptness, the governor of California appointed an impartial and able commission to investigate the causes of the failure. With commendable good sense he recognized the place of geology in the investigation and appointed two geologists to serve with four engineers. This commission made a thorough study of the problem in all its aspects, and a printed report was issued recently.[1] The report is a brief, straightforward statement of facts and conclusions. It merits careful study by every civil engineer, every geologist and every one who is interested in the relation of large structural projects to the public safety.

The most significant conclusion of the commission is contained in one direct, unqualified sentence: "The failure of St. Francis Dam was due to defective foundations." So far as the evidence can show, the dam itself was perfectly sound both in design and in construction; but it goes without saying that the best dam in the world, if erected on a weak and leaky base, is a public menace. The degree of defectiveness in the foundations of the St. Francis structure is made clear by the report. Mica schist, a rock made up of thin, weak layers or folia, is the bedrock beneath the bottom and one side of the valley at the dam site. Conglomerate, composed of poorly cemented gravel and other detritus, underlies the other valley wall. Thus the bedrock is inherently weak under the entire dam; but to make matters much worse, the conglomerate and schist are separated by a wide zone of shearing, in which the rocks have been ground and mashed by powerful earth-forces. When a sample of material from this zone is placed in water it disintegrates rapidly to incoherent particles. Yet this mass of material lay directly under the dam, subject to the softening action and to the enormous pressure of water in the reservoir. It appears, then, that the foundation of the dam had many elements of weakness and none of strength.

The geologic conditions in the valley, including the existence of the shear zone or *fault,* were well known to geologists before the dam was built. No competent geologist would have approved the dam site without serious reservation, and probably very few would have consented to construction of the dam in that place under any consideration. But it does not appear that any geologist had a hand in selecting the site, or in making inspection of the work as it progressed. Why not? The same geologists who took part in the "post mortem," as well as numerous others who knew the local geology, could have been consulted in the beginning. Their knowledge, had it been used at the proper time, would have prevented the catastrophe.

It is easy to point out errors after the damage is done; and not infrequently certain individuals or organizations receive an unjust share of blame for which a common condition or system is responsible. This article is not written with the purpose of censuring any person or any institution. It is intended rather as a protest against a situation that exists in many states, both east and west. There seems to be a tacit assumption in many quarters that the ordinary training of the construction engineer fits him to solve all geological problems he may encounter in his work. It is no reflection on engineers, individually or collectively, to state that this assumption is fallacious. Geology is a complex subject. Many of its problems tax all the resources of men who have devoted the best years of their lives to its study. Without question most engineers charged with the building of dams and other large structures would welcome cooperation by competent geologic specialists.

Disasters always call forth some condemnation of the *status quo* and many suggestions for improvement. In discussions stimulated by the breaking of St. Francis Dam the claim has been made that a special

[2] New map of the Arctic Region in Pet. Mitt., Erhänz. Heft 191. Also Stiller's Hand-Atlas, Zehnte Auflage.

[1] Report of the commission appointed by Governor C. C. Young to investigate the causes leading to the failure of the St. Francis Dam near Saugus, California; Calif. State Printing Office, Sacramento, 1928.