

Submarine Landslides Break Cables

Seismology

Under-sea landslides, set in motion by the earthquake on Monday, Nov. 18, were the cause of the breaks in trans-Atlantic cables at that time, in the opinion of Commander N. H. Heck, in charge of the U. S. Coast and Geodetic Survey's investigations in seismology.

With the aid of data gathered from seismograph stations by Science Service, Commander Heck and his associates determined the approximate center of the earthquake at 10 p. m. on Monday, less than seven hours after the quake had occurred.

The widespread area over which this quake was felt, the serious tidal waves that were caused and the breaks of the cables, all show that it was one of the most severe ever experienced in the eastern part of North America, he stated. Evidently it was very deep-seated under the ocean bed. Thus, instead of having a small, well defined center, it seems to have centered over a large area.

In this part of the ocean, just off the edge of the continental shelf, the ocean bottom has a steep slope, and so the shake doubtless caused submarine landslides which broke the cables. The origin, off the coast of Newfoundland, was well to the north of most of the breaks, at approximately 44 degrees north latitude and 58 degrees west longitude. This point is about 180 miles off the Newfoundland coast.

The vibrations of the shock, traveling through the earth to the sensitive seismograph instruments at a number of observatories, carried the news to the world many hours before the telegraph lines carried news of its effects. Using a special code, several of the most important of these stations telegraphed their data to Science Service. Commander Heck was able to tell the distance of the center from each of the stations reporting. Correlating these, he determined the approximate position of the quake's center which was announced

through Science Service at 10:30 p. m. the same day.

A quake such as this is very difficult to locate accurately, he said, because of its large area. The vibrations which arrive at different observatories may come from different parts of the shaken area. Then it would be quite impossible to fit them all together.

Commander Heck estimates that the tremor was severe enough to be felt as a strong shock over an area of 200,000 square miles, mostly at sea. Over a still larger area, about 1,500,000 square miles, the earth quivered sufficiently to cause a perceptible shaking on land. A shock must be quite strong to be perceptible to a ship.

A quake in this region is quite unprecedented, he said, and shows that any part of the earth is liable to such shocks. However, there is no evidence that any further shocks will occur in the same locality.

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Tells How to Fight Blindness

Ophthalmology

"Eyes have been preserved by people not infecting them," Dr. Park Lewis, vice-president of the National Society for the Prevention of Blindness, declared in the first 1929 De LaMar lecture at the Johns Hopkins School of Hygiene and Public Health.

Prevention of blindness is made up of negations, Dr. Lewis said. He traced the sight-saving movement from its beginning fifty years ago when a means for preventing ophthalmia neonatorum, or babies' sore eyes, was found. This disease was and still is a big cause of preventable blindness.

The first adventurer in sight-saving was Dr. Karl Siegmund Franz Credé of the University of Leipzig, Dr. Lewis said. Dr. Credé found that the application of silver nitrate to the eyes of babies shortly after birth prevented the development of the dread babies' sore eyes and ensuing blindness. Dr. Credé started using this preparation in May, 1880. During the first five months of that year nearly one-tenth (7.6 per cent.) of the babies born in his hospital had developed ophthalmia neonatorum. In all the births during the remaining seven months of the year, when the silver nitrate treatment was being followed, there were no infections.

Ophthalmia neonatorum is now ab-

solutely preventable and has been for 50 years. The infection may even be cured, if treatment is started before the disease has progressed too far. In spite of this, progress has been slow and even today many children lose their sight because of this entirely preventable disease, Dr. Lewis said. Ignorance or carelessness on the part of the attendant at the birth of the child is responsible for this deplorable condition. However, with state boards of health everywhere furnishing the preventive medicine free, even the poorest parents may insist on having their new-born babies protected from this cause of blindness.

Other adventurers in sight-saving mentioned by Dr. Lewis were two English physicians, Drs. M. Roth and R. E. Dudgeon, who with a few colleagues formed the London Society for the Prevention of Blindness over forty years ago; Dr. Ernst Fuchs, whom Dr. Lewis called dean of ophthalmologists; Mrs. Winifred Holt Mather who founded the Lighthouse movement, and her sister, Mrs. Joseph C. Bloodgood; Miss Louisa Lee Schuyler who established the New York Society for the Prevention of Blindness which has now become the National Society; and Dr. Lucien Howe who presented the cause of

blindness prevention with telling results before legislatures and medical societies throughout the country.

Trachoma is another cause of a large amount of preventable blindness, Dr. Lewis said, and described the work that has been done among immigrants and more recently among the Indians and the mountaineers of Kentucky and Tennessee. This "creeping menace" is an infectious granulation of the lining membrane of the eyelids. It may be relieved by treatment, which, while slow and painful, is well worth while, as blindness is the end result to untreated trachoma. The Japanese investigator, Dr. Hideyo Noguchi, thought he had found the organism causing this disease, but his studies were interrupted by his untimely death. Whatever the causative agent, trachoma may be prevented and may also be overcome if attacked early enough.

International cooperation to prevent blindness is the latest adventure in sight-saving and may be expected to foster further and even greater progress in this field.

"The world is awakening to the necessity for saving the eyesight of its people," Dr. Lewis declared.

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