

were both giant turtles and little ones then, as there are giants and little ones today. There were some huge crocodilians then—but so far as that goes there still are pretty big “croc” and alligators, where they have not been shot up too much.

The most successful of modern reptile

groups, the one that includes both lizards and snakes, were less developed during the Tertiary than they have become since. In fact, the snakes at least have apparently undergone the greater part of their evolutionary development since the end of the Age of Reptiles.

Science News Letter, May 8, 1937

GEOPHYSICS

Severe Magnetic Storms Disturb Telegraph and Radio

At Times It Was Impossible To Send Any Messages As Fluctuations Occurred in Earth's Magnetic Field

FLOODS in the East were not the only evidences of storm during the recent past.

A different kind of storm, having no known direct connection with the weather, raged about the whole earth from Sunday, April 25, until Thursday, April 29, unseen, unfelt, unnoticed by most people, but making no end of trouble for telegraph and shortwave radio operators and engineers.

It was a magnetic storm, consisting of fluctuations in the earth's magnetic field. Dr. A. G. McNish, of the Carnegie Institution's laboratory of terrestrial magnetism stated that it was the most severe magnetic storm experienced for many years.

Its most immediate and important consequences, in the affairs of the everyday world, were severe interferences with types of communication depending on magnetic circuits in wire and radio waves in air, that is, the telegraph and radio businesses. The telegraph companies had “dead” periods when their instruments would not work, and the radio signals were subjected to sudden and severe fits of fading.

Transatlantic telephony showed a noticeable disturbance for a half-hour at midday on Sunday, and again from 2:25 p. m. until midnight. Severest difficulty occurred on Tuesday night, when transmission fell, for a short time, as low as four per cent. of normal.

Transatlantic shortwave radio was in similar difficulties. Between 4 p. m. and 4 a. m. daily, strong magnetic effects were noticed. At times it was impossible to send messages at all. In addition, there was a certain amount of noon-day “blanketing.” These difficulties, however, did not appear in the radio

traffic with Central and South America except for a few brief intervals.

Another consequence, which would have been more noticed if the skies had been clearer in the East was a great increase in the display of the aurora borealis. Capt. N. H. Heck, of the U. S. Coast and Geodetic Survey, said that only a cloudy sky prevented the aurora from being seen at Washington, D. C. Such a display at this latitude is a rare event.

There appears to be a correlation between sunspot activity and magnetic storms. At present the cycle of sunspot activity is rising to a maximum, so that more of these disturbances are to be expected during the coming few years.

Magnetic storms tend to recur about every 27 days, that is, once for every rotation of the sun. There was a severe one during the last two days in March. The next magnetic storm may therefore be expected a few days before the end of May.

Sunspots Marked Coming

Two great groups of sunspots, “among the largest of the present cycle,” marked the coming of the storm, Dr. F. H. Seares of the Mt. Wilson Observatory, in California, wired Science Service. The storm was marked by rapid fluctuations in the earth's magnetic fields during intervals of from twelve to twenty hours, separated by periods of quiescence lasting from eight to fourteen hours.

Science News Letter, May 8, 1937

Children who get enough vitamin D in diet when their permanent teeth are forming are less apt to have the molar teeth decay in later years, so British researchers conclude.

GENETICS

Rickets Tendency Shown To Be Hereditary

RICKETS can “run in the family,” it appears from experiments reported here before the meeting of the National Academy of Sciences, by Drs. G. L. Streeter, E. A. Park and Deborah Jackson of the Carnegie Institution of Washington. The research was conducted at the Institution's department of embryology in Baltimore.

It is not the disease itself that is inherited, but the tendency to develop it if the diet is lacking in vitamin D and is defective in other respects during a critical period of early growth.

Dr. Streeter and his associates put young rats on such a rickets-producing diet as soon as they were weaned. After three weeks on the deficient diet the animals were X-rayed, to show how far rickets had developed, and were then returned to normal diet. At four months of age they were bred.

By mating susceptibles with susceptibles, after fourteen generations a strain of rats was produced which, though it resembled the non-susceptible rats in every other respect, showed a consistent, high hereditary tendency to develop rickets under dietary conditions to which the other rats showed a greater degree of resistance.

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