Gulf Coast of the United States those thirty million years ago.

Wet and Dry

With this notable exception, however: that whereas our Gulf Coast now has a pretty steadily moist climate, the ancient Geiseltal and all the region round about alternated between wet seasons and dry. During the rainy season, vegetation flourished and the animal population throve accordingly. But when the parching droughts came, animals had a harder time of it. It was then that they crowded upon the water-holes as they do in our own West to this very year of dry distress 1936. Then, as now, they sometimes fell into the water they were drinking, and being too weak to struggle out again, drowned and left their bones to testify to their tragic end.

Another kind of water-trap awaited the beasts of the ancient Geiseltal, that is not so widely found in our present West, though the same kind of thing is abundant in the Gulf Coast region, especially in the northern part of the Florida peninsula. These were sink-holes, round, steep-sided, funnel-like cave-ins, where the thin crust of the earth has broken through the roof of a limestone cavern underneath. In present-day Florida these are often filled with water the year round, and in them alligators live, lurking for prey that ventures or accidentally falls down the steep sides. So was it also in the Geiseltal, for in these filled-up sink-holes one finds crocodile skeletons added to the bones of other victims.

Kinships

These resemblances in topography are not the only links between this part of Germany thirty million years ago and the America of today. Prof. Weigelt points out numerous kinships between his animals and those of like age on this continent. Up until a short time before the days of the Geiseltal fauna, he says, a land bridge existed between Europe and North America, so it is only natural that this should be so.

The stage for the tragical dramas of the drought, as they were played out so long ago in the Geiseltal, was set by droughts perhaps even more severe, and very long before even the Geiseltal was formed. For the whole terrain is underlain with beds of salt and gypsum, and these minerals are formed only when landlocked seas are slowly evaporated down to nothing or near that, as is happening in the Caspian Sea basin today.

On top of the salt and gypsum strata other layers of less soluble material were piled, becoming in time solid rock. This formed the crust, the foundation of the early Geisel valley. But water, seeping through the soluble minerals beneath, formed cavities, and the crust gradually sank, deepening the valley and permitting the formation of lakes and bogs. These filled with vegetation, and as the valley continued to sink, the bogs continued to build themselves up, developing the enormously thick deposits that are now the lignite beds.

The valley bottom did not all sink at once, or at a uniform rate. Faster solution of the salt and gypsum beneath made "soft spots" here and there, and these collapsed under the weight of the overlying material, forming the crater-like sink-holes.

How many thousands of years this process went on there is no way now of telling exactly; though it is legitimate to guess that it was tens or hundreds of thousands of years a-doing. And all this time the interplay of abundance and drought, of life and death, went on in the valley, focusing with special intensity around the little lakes and the sink-holes. And the story of this long development is now being taken out of the Cecilie lignite mine by the patient fingers of the German scientists, and you can see it all in the aisles of the Museum of the University in Halle.

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INVENTION

Thomas Edison to Speak at 100th Anniversary of Patents

THOMAS EDISON'S voice will speak to dinner guests at the celebration, in Washington, D. C., of the 100th anniversary of the American Patent System on November 23.

Leading inventors, patent attorneys, industrial leaders and government officials will participate in the celebration, it is announced by Dr. Charles F. Kettering, president of the General Motors Research Corporation, in accepting the invitation of the Secretary of Commerce, Daniel C. Roper, to serve as chairman of the National Committee being formed to celebrate the event.

The tentative program calls for addresses in the morning of the Centennial Celebration day at Washington reviewing the progress made in the last century under the present Patent System and the significance of the law on the growth of the United States. The present value of the system to raise the American standard of living will be discussed and the continued growth of the inventive arts in the future forecast.

In the afternoon new "invention babies"—industrial developments just ready to take their place in economic usefulness—will be shown in a series of demonstrations.

Climax of the Centennial day will be a large dinner at the Mayflower Hotel in Washington when special novelties of interest to all inventors will be on the program. Transmission of the original Morse telegraph message will be reenacted between the old Baltimore and Ohio station in Baltimore to the dinner hall, where it will be received on one of the two original Morse instruments loaned by Cornell University. The late Thomas A. Edison will also address the dinner guests in his own words from one of his early phonograph recordings.

Science News Letter, October 3, 1936

BIOCHEMISTRY

Enzymes Can Be Formed From Inactive Proteins

ENZYMES, the highly complex proteins that make digestion, breathing, body warmth and many other physiological processes possible, can be formed out of inactive proteins by suitable chemical manipulation and heating, Dr. J. H. Northrop, of the Rockefeller Institute for Medical Research, reported to the Harvard Tercentenary. He described a number of experiments where such enzymes had been "manufactured," including one in which the material generated was an enzyme isolated from the still-mysterious germ-destroying bacteriophage.

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