

# Will This Really be the Fate of the Earth?

The Famous French Priest-Astronomer, Abbe Moreux, Says That the Earth, Which Once Blazed Like the Sun, Is Slowly Contracting and Losing Its Shape, That It Is Doomed to Go Through "Terrific Convulsions," and That Much of the Present Land Surface Will Sink Into the Sea Before the Sea Itself Dries Up.

**W**HEN violent shocks like those that have been felt in the last few weeks come to menace some point on our planet, riving cities and spreading desolation over extensive districts, our uneasy minds interrogate science and demand of it the solution of a problem that has been mooted for many centuries. Let a violent earthquake be felt and immediately powers and states in a burst of spontaneous, instinctive brotherhood feel, as it were, the necessity for coming closer to each other; dissensions will give place to anxiety over the common peril, and we all worry about this life of ours that is periodically threatened by the instability of that element which we dignify with the pretentious name of terra firma!

Since December 28 geologists and astronomers have submitted to many an interview. The explanations given by the former have often seemed insufficient, while the latter have generally avoided the subject. It may seem presumption on the part of an astronomer to go to work in territory reserved for geologists, but to what science should we have recourse for the story of the earth's past. Has not the astronomer always before his eyes thousands of suns at all periods of their life? Does he not know that after having shone for a second on the clock of time our sun itself will become extinct and will roll on through space like the dead suns of the Milky Way? Better than geology, then, astronomy is the science which projects the light of present times upon the mysteries of the past.

Millions of years ago our humble little earth shone with its own light, a blazing star; it also warmed its satellite, just as the sun to-day dispenses to us its light and its heat; but in its dizzy course around the sun, in its interstellar voyage among the constellations of heaven, like the sun, it never reposes the same place, and its original heat has quickly been dissipated by contact with the cold of space, which modern science estimates at 273 degrees Centigrade below zero.

**Birth of Life on Earth.**

Little by little it became enveloped in a thick mantle of clouds, just like Jupiter at the present time. Then came the final moment: Upon its surface

with my friend Col. du Ligonides, have succeeded in accomplishing in these last few years. In 1902 I indicated just what might be drawn from the sketch made by Green to explain the theory of volcanoes and earthquakes. A few lines will suffice to make the reader understand the hypothesis.

The earth is round, of that there is no doubt; its rotary movement has swollen it at the equator and flattened it at the poles. Such is the general formula which has now become classic. But its volume diminishing from the effects of cooling, the earth has reached the condition of a balloon from which the gas is escaping little by little. It is tending toward the shape of a pyramid with four faces and four apices.

**The Terrestrial Globe.**

Examine a terrestrial globe. Three of the faces are represented by depressions—the hollow of the Pacific, the Atlantic ocean and the Indian ocean. To these depths correspond over the sixtieth parallel north three of the apices of our pyramid, which became prominent very early, as the vast layers of primeval rocks bear witness. These are the Canadian height, that of the Baltic and that of Siberia, the center of which is found not far from Irkutsk. From these three apices radiate, like continental backbones, branches which, with more or less interruption, continue to the South Pole. Since the voyage of Nansen we have known that the fourth face of the pyramid can be placed in the great Arctic basin, while the Antarctic continent forms the fourth apex of our pyramid.

It is around these ridges and these apices, which have remained stable throughout the great geological periods and have formed, so to speak, the skeleton of the dry land, that what may be called the slow revolutions of the globe will continue to take place. All the general phenomena of the surface of the earth can be explained by three species of movements:

1. Each face of the pyramid in its center follows the core in its contraction. Thus, it is a sinking movement which has formed the great depressions of the oceans.
2. At the edges of the faces, that is to say, round about the ridges, we find lateral compressions of the crust, which tend to cause movements from

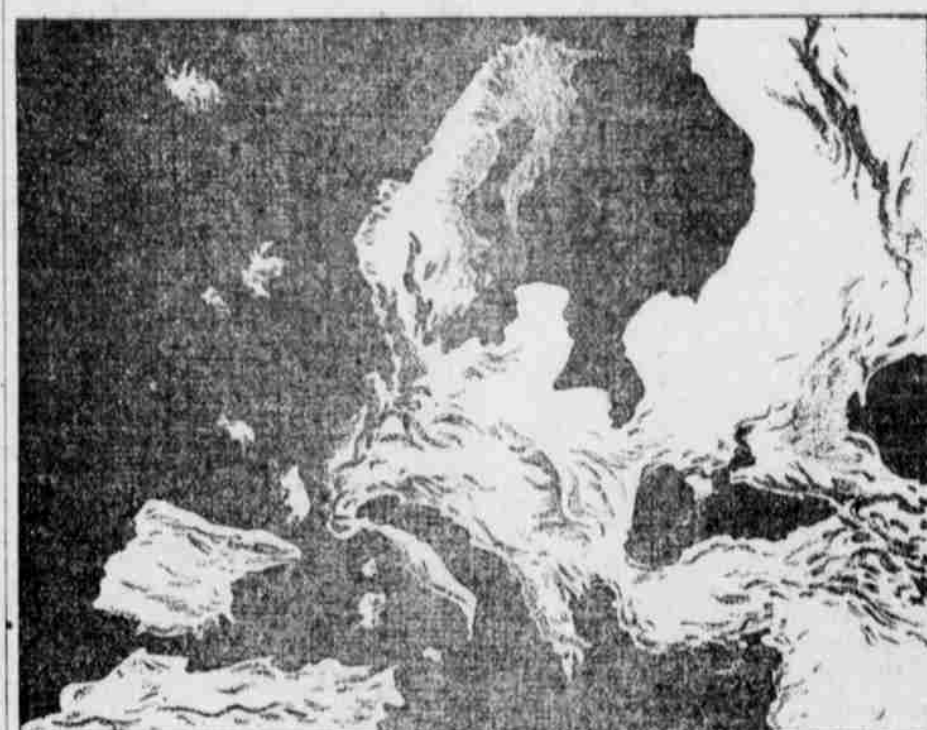
phenomena of volcano and earthquake by the process of the contraction of the earth. And we shall see how experience absolutely confirms this theory.

Let us take up the terrestrial globe on which we marked the ridges and the apices of our pyramid. Around these resting points the continents have been formed and the lines of dislocation will be easy to recognize. Volcanoes, old or new, are all grouped around just those points that mark the limits of the broken parts. As this is on Mercator's projection, the spheres spread out into a plane, the three ridges of the pyramid have become, like the meridians, parallel lines. Alongside the great American ridge an uninterrupted volcanic line is seen. Around the second are grouped the volcanic districts of Iceland and Jan Mayen, the extinct volcanoes of Auvergne (in France), the volcanic regions of Sicily and eastern Africa. A third line, which joins the first by way of the Aleutian islands, surrounds the third ridge, and this is made up of the volcanic regions of the Kurile islands, Japan, the East Indies and New Zealand.

**Unite at South Pole.**

All these files of fire unite at the south pole around the fourth apex, which is the Antarctic continent, the borders of which show us also signs of the same kind, with the volcanoes Erebus and Terror.

But this is not all. You may have noticed that the three great ridges of the pyramid tend toward the east. This is due to a well-known law of mechanics, which provides that every planet which diminishes in volume increases its speed of rotation. The three great apices or summits of the northern hemisphere arose very early, and as they were further away from the center of the earth than regions further to the south they, for this reason, dragged behind; and so all the



RELIEF MAP OF EUROPE AS PREDICTED BY MOREUX.

southern part of the globe accelerated its rotary movement in respect to the northern part; hence, a dislocation which caused what geographers call the "Mediterranean depression," that immense depression which, from the Antilles to the Pacific, passing by way of the Mediterranean sea, the Persian Gulf and the East Indies, forms one of the zones of least resistance on the crust of the earth. There is also found along this one of the most sharply accentuated volcanic lines.

As for the earthquakes, the area that they cover is, as the theory would lead us to expect, much vaster in extent. In fact, they occupy those regions that may be compared to inclined planes. They are, to a certain extent, independent of the volcanoes, and intimately related to the steep inclines of the earth's surface. This explains the fact that the centers of shaking are in general localized in the marine abysses along the lines of high relief.

**To Be Answered by Time.**

When the crust of the earth shall have become too thick to bend before these periodic oscillations what will become of our globe? When the pressure upon the internal core shall be felt perpetually, how will those gaseous behemoths which are compressed in that immense reservoir from which we are separated by such an insignificant crust? Terrific convulsions will then menace our miserable planet.

Ask an astronomer to show you the tormented and shattered face of our satellite; the surface of the moon shows us, very probably, the desolate aspect of a world in which volcanic action, in the spasms of frightful agony, has put an end to all planetary life.

Cataclysms will transform our earth, and at that time the volcanoes of the central plateau will warn mankind that the stability of the earth is a vain word. Everything passes, everything changes, nothing is stable, everything who created the world and who gives to men when it pleases him such grand and terrible lessons.

The Abbe Moreux in his article goes into details of what these changes that he describes are likely to do to Europe. American readers will find it more interesting to consider what will be their effect upon North America. Applying the abbe's reasoning, it is possible to make a forecast. Physical geographers tell us that the great chains of mountains which stretch from Canada to South Carolina were thrown up at very early periods, though separated by relatively wide intervals. The oldest rocks on the continent are those of the Laurentian mountains, in Quebec. The Adirondack dome were an island before the Catskills or the Alleghanies had risen

from the water. But the line which Father Moreux calls the American ridge, beginning in Hudson Bay and extending through the West Indies and South America to the south pole, is, roughly speaking, the backbone of the continent and follows the general line of the Appalachian chain. This part of the country is destined to rise even higher, while the central plateau, from the great lakes to the Gulf of Mexico, forming as it does one of the areas of least resistance, will be submerged.

**New York's Probable Fate.**

And what of New York? The geologists tell us that the city lies on the edge of an enormous fault, the Palisades of the Hudson having been thrown up by some giant organism of nature while the land to the east of them dropped, the actual line of breakage being the bed of the Hudson. Any further shock at this point would intensify this line of the Palisades and this drop of the land to the east of them, so the prospect is that some day the harbor and the Hudson river will rise and engulf the city.

The Rocky mountains, while comparatively distinct from the principal ridge of the continent, are, in a sense, a duplication of it. They were thrown up by a fearful cataclysm, which left the depths of the Pacific in the hollow beyond them. Many of them are evidently volcanoes, quiet now, so far as those in the United States are concerned, but still active in Mexico, Central America and Alaska. A shock of vast extent would lift them even higher, and all the prairies would sink into the gulf between them and the Alleghanies.

Thus will the union be disrupted—by an ocean separating the Pacific states from what is left of the Atlantic states!

Shall we live to see it? Who can tell? These cataclysms come without warning, but it is reassuring to remember that they come at intervals of tens of

## The Odd Happening of Mr. David Cobb

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The city had had an attack of morality and all gaming houses and bookmaking offices were closed up as closes the clam. Cities have these spasms as a man has the colic. The one stops gambling and the other eschews cucumbers—for a while.

A certain firm of bookmakers did not resign themselves to the fiat of the law. They procured a copy of the edict and scrutinized it as they went to examine the program for the day's races. They discovered in the statute an aperture through which they could drive the metaphorical horse and wagon. The law forbade bookmaking save on race courses where races were being run. Straightway they leased for a song a disused half-mile track near the city, ran two flogs over it every day for a purse of five dollars and made books on every race from Sheephead Bay to the Pacific coast. If the law frowned that's all it could do.

The peaceful little village wherein was the race course became transformed. Farmers studied dope sheets as they guided the plow and talked knowingly of mud-larks and cinches. Everybody became a sporting man and among them David Cobb, the village carpenter.

Cobb was sore smitten with the betting disease. It would have puzzled him to try to name the boundaries of his state, but he knew the pedigree of pretty much all the horses running and once and a while he won a bet.

A felicitous run of luck which Mr. Cobb had been enjoying suddenly changed and fortune—ever a capricious jade, turned her back on him. He couldn't win a bet and one August day found himself penniless. He sat gloomily on a trellis in front of the blacksmith's shop listlessly reading the entries for the day. Mr. Quinn, a disqualified jockey from one of the big

sewing we would all be turned out in the road for we owe two months," and she held up two ten-dollar notes.

"This was an unwise move. An old saw sayeth, 'let sleeping dogs lie' and it might be applied to recumbent husbands. The sight of those two ten-dollar notes acted on the raw nervous system of Mr. Cobb as might a galvanic battery. He sprang from the bed and snatching the notes closed them up in his hand.

Then Mrs. Cobb executed a diplomatic movement worthy of Talleyrand. She caught her husband's clothes that were on a chair and clasped them against her body. The two glared at each other.

In the meantime the truculent man was knocking at the front door.

"Open the door and come upstairs," called Mrs. Cobb to the truculent man from the window.

Mr. Cobb's eyes roved around the room. He heard the front door open and then he stooped and passed through the window onto the porch roof. He let himself down from the spouting and dropped to the ground. He speered for the betting room clad in his night shirt.

"Stop him," screamed Mrs. Cobb to the truculent man, "he's got your money."

The truculent man dashed after the fleeing Cobb with Mrs. Cobb close at his heels. Urchins along the road delighted at the sight of a man in a night shirt sprinting in front of a stout man and a bony woman acclaimed the trio vociferously.

However, Mr. Cobb had too good a lead, besides he was dressed or rather undressed for running and he entered the betting room door fully three lengths ahead of the truculent man. Reaching the desk Mr. Cobb saw that the race in which Lucky Dog was already marked "at the post" and he had but little time.

"Lucky Dog to win," he said, handing the two notes to the bookmaker.

"They're off," called the man at the telegraph instrument.

"One hundred and sixty to twenty," Lucky Dog," drawled the bookmaker, handing Mr. Cobb the ticket.

The truculent man leaned over the desk and said, gaspingly:

"That money's mine."

"That money's now on Lucky Dog. He's running at the rate of a mile in one minute and forty seconds," remarked the bookmaker, "if you can catch him and take it off you're welcome to it."

Oppressed by this problem the truculent man wiped his brow and the man at the wire called, "Lucky Dog at the quarter."

"Lucky Dog at the half by two lengths," called the operator.

Mr. Cobb was standing on one bare foot.

"Lucky Dog in the stretch, all whipping," called the man at the wire.

Then Mr. Cobb, the sweat dripping from his face, lifted up his voice.

"Come on Lucky Dog. Come on old horse. You're running for Dave Cobb."

"Lucky Dog wins easy by a length," called the operator.

Then Mr. Cobb changed into a dancing dervish and spun around uttering odd ejaculations.

"Pay off Lucky Dog tickets," called the bookmaker.

Mr. Cobb received \$180. He handed \$20 to the truculent man with the mien of a Roman conqueror dividing up a captured kingdom. He tossed \$50 into his wife's apron and sought to put the balance in his own pocket but found no such convenience. He looked down and saw how he was attired. Then he blushed and darted homewards.



**He Was Dressed or Rather Undressed.**

tracks and now a betting room tout, came languidly across the road and accosted him.

"Dave," said he, "I have it."

So great was Mr. Cobb's depression that he made no inquiry as to what Mr. Quinn possessed.

"Here's a letter from a man who gives me only two or three tips a year and they never fall down. Here it is: 'Lucky Dog will win the second handicap race at the Bay Wednesday. Get on it.' Now, Dave, here's our chance to make a good stake for the season."

"What's the use of talkin'?" asked Mr. Cobb, disgustedly. "What's a tip to a man who's got nary a cent to bet on it?"

"Can't you raise ten dollars?" inquired Mr. Quinn, interestedly.

"I can't beg, borrow nor steal a dollar let alone ten. And there's no job o' work I can get."

"Busted, eh?" and Mr. Quinn walked off seeking another capitalist.

For some reason the name "Lucky Dog" kept dining itself into Mr. Cobb's ears all day and all the next day. He felt a prescience that the horse would win albeft that his researches disclosed that he had only run once in the far west.

Two o'clock on the eventful Wednesday on which the tip was expected to materialize found Mr. Cobb abed. He had not arisen for he reasoned with logic that a man who could not raise the insignificant sum of a dollar may as well lie in bed as stand on his feet. Another point was that Mrs. Cobb had proclaimed with acerbity in the morning that, as the breakfast and dinner would result from her individual earnings he would not be expected to participate in the repeats.

Mr. Cobb lay prone and gnashed his teeth when he thought of the busy scene in the betting room nearly opposite to his house. Already the odds were up against Lucky Dog. If he should win Mr. Cobb felt sure he would foam at the mouth like a mad man. No one could stand such a buffet from fortune as that.

A man with a truculent face came down the dusty highway and Mrs. Cobb glimpsing him ran upstairs. She opened the Bible lying on the bureau and taking something from between its leaves turned to her husband.

"The collector is coming for the rent," she said, "if I had not taken ten dollars from your winnings one night and made ten more myself by

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**Americans Spending Less in Paris.**

American travelers abroad, upon returning home, are reporting with greater frequency that they have been advised by American consular representatives to save their money and buy at home. A few years ago a consul who took any interest in American affairs except politics and his salary was a rarity. In Paris alone American importations during the past year were \$21,000,000 less than in 1907. At that they amounted to more than \$42,000,000. There were two other contributing causes to the fall in Paris sales to Americans, the financial depression and the fact that London is rapidly taking the place of Paris as the great European market for Americans.

**The Trunk of the Elephant.**

The long trunk of the elephant is very, very wonderful. The neck of four-footed animals is usually long, to enable them to reach their food without difficulty; but the elephant has a short neck to enable him more easily to support the weight of his huge head and heavy tusks. The long trunk helps him to get his food, and the trunk is to an elephant what a long neck is to other animals.

**American Burial Caskets in Demand.**

American burial caskets in considerable numbers are now exported to various foreign countries, including the West Indies and South America, and England, South Africa, and Australia.



RELIEF MAP OF EUROPE AS IT IS.

there formed a crust, which imprisoned within it a core, gaseous, liquid, and at a high temperature. The geological periods began, life appeared in the warm waters, while the cold, ever at work, was incessantly causing the internal mass to contract, soon the shell became too large for the liquid mass inside, and it was then that the wrinkles appeared in the bark—those ridges which later were to give birth to our ranges of mountains.

But nothing in nature is made without law. It had always been believed that the ups and downs of the surface were formed rather by chance until Lowthian Green, about 40 years ago, suggested the general process by which the continents were formed, writes the Abbe Moreux, curator of the observatory at Bruges, Belgium, in the New York World. At first treated with derision, Green's theory at last came under the high patronage of M. de Lapparent in France. From the point of view of the astronomer, many points remained to be cleared up. This is the work which I, in collaboration

below upward. There it is that the fractures take place.

**Regions of Earthquakes.**

3. As the earth's crust grows thicker the inclined planes between the faces and the ridges have a marked tendency to dislocation. These regions are gradually rejoining the depths of a sort of slow but constant downward movement. There also we expect to find the regions of earthquakes, and we shall see that experience confirms this view. In the course of geological times other very important wrinkles have been produced here and there. These generally tend to a direction perpendicular to the primitive fractures.

As for the parts of the crust which lie in the inclined planes in the neighborhood of volcanic regions, they will always, because of their tendency to slip down among the parts that have already fallen, be subject to a falling movement, and will be specially favored in the way of earthquakes.

It is thus that my theory has the advantage of explaining the double