

# The Origin of the World

By R. McMillan.

## THE HISTORY OF THE HORSE.

### CHAPTER XIX.

It seems very easy to talk about the way that things change, but we see little or no change in the things about us, do we? The horse was always a horse, and the donkey was always a donkey; just as the sheep was always a sheep, and a man was always a man. Yet here I am saying that everything has changed, and that all we see and know, even to the solid and mighty hills, was developed from the white fire-mist which once spread out in hazy mystery in the realms of space. If you believe that the world was really developed from the fire-mist, then you are compelled to believe that all things have developed on the earth, although it seems difficult. It would take such a long time for all things to change from a fire-mist, a simple fire-mist, to the complicated things that are on the earth today. It would take a long time, of course; but time is plentiful in eternity!

We have made time a real thing with our clocks and watches and calendars, but that is all human imagination. There is no such thing as time, really. What we call time is just the sequence of events. The world turns round in twenty-four hours, and we call that a day; but a day is not a real thing. It is only the revolution of a ball. How many times will the ball revolve before it gets tired? The number of revolutions will give you the age of the world. We think that it is an important matter, but it is not, really. You have to change your point of view when you dare to ask how the world originated.

You think of the horse as a fixed type of animal, and so it is, relatively to other animals. All the same, a horse has developed, just as everything else has, and we are only now finding it out. I remember when Professor Marsh found the fossil remains of the horse in America, and yet we used to think there never had been any horses in America till the Spaniards took them over, after 1492. That was the date when Columbus discovered America. Think of Spaniards taking horses across the Atlantic in their little ships, over four hundred years ago. We bring horses from England to Australia now, 13,000 miles; but we carry them in steamships, and we know how long it will take, almost to the hour. When the Spaniards took horses across the Atlantic they had to trust to the wind, and they never knew how long they would be, and the ships were very, very small, and storms were just as frequent then as now. Yet they took the soldiers' horses to America.

When I was a little boy, and read about Cortes and Pizarro conquering South America, I remember what an effect the sight of the horses had on the natives. They thought the horse and the man were one animal, and when the man fired his gun, and they saw the flame and heard the report, their terror of the new animal was complete. That was how the small band of Spaniards were able to conquer Mexico and all South America. The point I want to make here is simply that horses were quite unknown to the people in America. They had never seen or heard of one, and when the Spaniards came with their horses they were terrified at the sight of them. When the Spanish horses escaped to the great level lands of South America—the "Pampas" they call them—they flourished exceedingly, and grew wild, and galloped over all the land in enormous droves, like the waves of the sea.

You wonder why the horses had never appeared in America when they had been so common in all historic time in Europe and Asia. When you learn that the bones of the fossil horse were discovered in America afterwards, when men began to study geology, you wonder still more. The horse was very common in America "once upon a time," be-

fore men had ever seen America. The ancestor of the horse was developed in America, and must have been very widespread on that great continent. But how did it get from its home, in what we now call America, to the other parts of the world? Once you start thinking about this subject, you will find that there is no end to the wonder and to the curious things in connection with it. There must have been a great change in America to destroy the equine life entirely, but what that change was I am quite unable to explain. I want you to understand that the mystery of life and the world is greater to me than it can possibly be to you, for I have found out what a lot of things I do not know, while you are ignorant of your ignorance, to some extent at least.

An old-world poet named Lucretius, who lived in Italy before the time of Christ, must have known that all things change, for he sang:—

Time makes mutable the whole world's mass,  
Which on from phase to phase must ever change;  
Naught keeps its native likeness; all things pass,  
All things by Nature's laws must shift and change.

When I first read the history of the horse, as written in its own bones, in the Peabody Museum, in New Haven, Connecticut, U. S. A., I was too much surprised to understand it. I had always thought that the horse had been a horse from the commencement; but when I looked at the bones in the museum I saw that there had been a time when the horse was not a horse, as we understand the word. The geologists found the bones of the horse in Western America, buried in the rocks and clays and stones of an ancient world. They found that the horse, as we understand it, was an old animal in point of time, but—they discovered something else. They discovered that there was once a horse with three toes instead of the single hoof which it has now. They saw that an animal like the horse had existed in the Upper Miocene times, but, instead of having one toe, it had three. They called it the hipparion, and they studied its character. Then, in the Upper Eocene, they discovered the ancestor of the hipparion, and it also had three toes; but the side ones were longer than in the hipparion, and it showed other differences as well, and they called it the anchitherium. Then they discovered the ancestor of the anchitherium, which they called the ohippus, and it had four toes; and there was another named eohippus, but I forget when it came in. Now look at the bones of the horse's feet, and tell me what difference you see! I have seen the bones themselves, and have read a good deal about them; and I am quite certain that these bones are the bones of the horse and its ancestors; and I am also quite certain that the horse of today is the descendant of the horses that lived in America long, long ago. But now, you look at the bones! \*

At the top of the foot marked A you will see four bones, one for each of the fingers, or toes, whichever you like to call them. At the top of the three-toed horse's foot you see three bones; but at the top of one marked D—the modern horse—you will see that there is only one big bone, and two very little ones. Now look at the foot and ankle of a horse, and you will find that the splint bones—as they call them—are the relics of the big bones that existed long ago. The horse has developed one toe, and the others have all disappeared except the splint bones, which are but the milestones to direct us back to the horse's ancestors.

I have not shown you the foot of the five-toed horse, for the simple reason that I did not see it myself; but I have no doubt at all about its existence. There was once a five-toed horse, but it was

\* This has reference to the illustrations in the book which, as we have already said, we are unable to produce owing to the matter of costs.—Ed. Clarion.

no larger than a fox or hare; it was a swift little creature, that flourished in the western parts of America a very long time ago—millions of years ago—and it grew bigger and stronger and swifter all through the ages, and gave rise to the quagga, and the ass, and all the varieties that exist today. It died out in America. You can read all that I have been telling you in the stone books of geology; but you cannot read why the horse died out in America, nor how it reached Europe and Asia, nor can you read—as yet—where and when the changes took place in the varieties of the horse, but—there are the bones in the New Haven Museum to show you that the changes have taken place.

The development of the horse is but the sign and token of all changes that have taken place in the world since first began the flight of time. I do not know what exterminated the horses from the American continent; but Sir E. Ray Lankester, one of the greatest naturalists in the whole wide world said:—

"It is not a far-fetched hypothesis that the disappearance of the whole equine race from the American continent just before or coincidentally with the advent of man—a region where horses of all kinds had existed in greater variety than in any other part of the world—is due to the sudden introduction, by means of some geological change, of a deadly parasite which spread as an epidemic and extinguished the entire horse population."

No explanations explain much; but there you have the problem—for you to solve!

Next Lesson: CURIOUS FACTS.

### THE HARVEST.

This year's harvest is believed to be adequate to satisfy all the requirements of Russia's population in food and seed, and even to provide a considerable surplus. The question as to whether any of this surplus of grain should be exported abroad has been much discussed. However gratifying it would be for Russia to resume her place once more as a grain exporting country after having been a needy importer for the last year or two, there are nevertheless good reasons for retaining this surplus in the country. In pre-war years there were always substantial reserves of grain, in the hands of merchants and peasants, carried forward from harvest to harvest. Since the war this stock has been completely consumed. It is of vital importance that new reserves should be built up, not only as insurance against famine, but to stabilize the price of food. The existence of grain reserves will afford welcome relief to industry, which for two years now has suffered from the repeated food shortages. On the other hand, some regions, such as the Ukraine and the south-east, will have comparatively large surplus of grain, which from transport considerations it might be just as profitable to export as to retain, and which would serve to purchase abroad articles much needed by the peasants. A certain quantity of Russia's surplus grain may therefore seek the foreign markets.

### UNSETTLED POLICIES.

In conversation with Lloyd George at Genoa, Chicherin said jokingly that it was not fair to demand repayment of the war loans, as Russia had not received her part of the bargain—Constantinople. Of course, he added, Russia would at once return it to its rightful owner, Turkey. A special correspondent of the "Manchester Guardian" discovered this statement recently, and embellished an article on Russia and Constantinople with the remark that "seeing how quickly the political mind in Russia is changing, what was yesterday a joke might tomorrow be a settled policy." Five days later (September 27) the "Manchester Guardian" developed this as "the present Russian Government has made known its claim to Constantinople. The claim was made by M. Chicherin at Genoa." The rolling joke certainly gathers moss!

—Russ. Info. and Review, (London)