

Fifteen Hundred Million Years of Life—Continued

finding dinosaur eggs in the Mongolian desert.

The weirdest dinosaurs that ever walked fill another frame. These were the Stegosaur, strange, high-hipped monsters with huge bony plates as big as sidewalk slabs standing up edgewise in a double row along their backs. These presumably prevented their hungry neighbors from attacking them in the most vulnerable spot, the spine. Two pairs of wickedly curved natural sabers on the swinging tail served as discouragers to flank attacks.

There were saurians in the sea and in the air as well as on land in the days when the reptiles ruled the earth. One picture shows a great sea-turtle making panic-stricken efforts to escape the gaping jaws of a Mososaurus, the one and original genuine sea-serpent. Indifferent to the fate of the poor turtle, perhaps even hopeful of picking up a few scraps when he has been hacked up by the great saurian's teeth, a flock of pterosaurs swoop and circle overhead.

The last great leap of the artistic-scientific seven-millennium boots brings us down to comparatively modern times. Mammals have arrived. But some of them are mighty queer to look at.

The favorite, of course, is the tremendous mastodon, the woolly elephant that roamed the northern lands during the Ice Age and apparently thrived on the cold. Prehistoric man knew and hunted this animal, ate his flesh and carved pictures of himself on his own ivory tusks.

There are two other animals, American this time, that certainly survived on the earth when man had put in his appearance, though whether man was here on this continent to see them and hunt them remains a very much disputed question. One of these was the giant ground-sloth, whose only surviving relatives, the Ai and the Unau, live in trees in Central and South America, and in crossword puzzles in the United States. The other was a giant armadillo, with a war-like spiked club on the end of his tail for the more cordial reception of bears, saber-tooth tigers, and such roving gentry. Another big armadillo lacked the spiky club-head, but had row on row of lesser spikes or knobs the full length of his tail, which probably answered the purpose about as well.

The bears are represented, too: a pair of shaggy cave-bruins, looking

out on a cold world and wondering, as a bear always does, where there is something to eat. Cave-men knew these bears as they knew the mastodons. They hunted them; and if they were anything like our modern Indians in their mental makeup they also "made medicine" in their honor, considering them the incarnation of mighty spirits.

In a way, the most thrilling picture of the whole collection is that of the giant Irish deer, higher than a tall man's head at his magnificent shoulders, and with his palmated antlers, more like the horns of a moose than those of a deer, spreading out nearly six feet on either side of his great head. A proud man was the tribal king in Ireland who could mark down one of these splendid animals as meat for his people and as a trophy for himself.

But all this show of beasts is by way of preface to the entrance of that strange creature who finds himself in the natural world, sees that he is a part of it, and yet feels that in some way he is apart from it and will not rest until he has made it subject to him—man. Man also is to be represented fully in a Hall of Prehistoric Man. The story here will not be told in paintings but by groups of life-sized figures executed by Frederick Blaschke, an able sculptor.

So far, one sculptured group has been completed, out of several that are planned. This is the Neanderthal cave, showing elders, youths and children of the earliest human race of which we have enough skeletal remains to undertake a restoration with anything like full confidence.

The artist has not tried to flatter these our remote grandparents—or more likely, remote great-uncles and aunts. Neither has he tried to degrade them and show them as more ape-like than they were. They're not as pretty as we might like to have all the portraits in the family album, but they're human nevertheless, and they are carrying on a lot of activities of a decidedly human character. They have formed a human family, they make and wear clothes (admittedly of a sketchy character, but still clothes), they make and use tools and weapons, they have a division of labor among the group.

They have not yet domesticated any animal, not even a dog; but they have tamed something vastly more important than any animal. They

have captured and controlled Fire. Ugly as he undeniably is, Uncle Neanderthal is Prometheus. With all our high-brow modern cleverness, our Archimedes learning the rules of the lever, our Newton binding the universe together with invisible cords of power, our Einstein turning the heavens inside out, we have never done anything more important for the race than that. Call Uncle Neanderthal a bonehead if you like: he knew enough to come in out of the rain, and indoors he had for his comfort, tamed and shackled and tractable, the most powerful and terrible of all the spirits of the forest—Fire.

This much you can see in the Hall of the History of the Earth if you go to the Field Museum now. There will be more groups of early human beings, especially those splendid six-footers the Crô-Magnon race, the first artists in the world. Further sculptured families will bring the story told in this hall down to the earliest dawn of known history, perhaps 10,000 B. C.

The third of the halls will be known as the Chauncey Keep Hall of Physical Anthropology. Here the story will be told of human life on the earth as it is today. The skeletons of man and his nearest animal analogues will stand side by side for comparison and measurement, and a series of twenty full-length life-size figures will illustrate the physical characteristics of all the principal living races of men.

Science News-Letter, June 14, 1930

Crushes Steel

THE strength of the prehistoric dinosaur is dwarfed beside that of a huge testing machine installed recently at the University of Illinois.

This machine crushes steel and concrete with as much ease as a man mashes a piece of dirt beneath his foot. It stretches iron rods as if they were taffy candy. In fact, it can exert as much as 3,000,000 pounds pressure in either tension or compression, either to pull things apart or to squeeze them together.

Building beams 35½ feet long can be tested. The screw that is used to concentrate the great pressure is more than 57 feet long and one foot in diameter. The machine stands nearly 50 feet above floor level and extends 14 feet below. It weighs 140 tons.

Engineering

Science News-Letter, June 14, 1930