The story of man—past, present and future—concerns every living person. Man’s past, however, is a much longer story than the average person appreciates. Many people realize that in order to understand the present and plan intelligently for the future we must have some knowledge of the past. But those same people may turn to ancient Egypt, to Greece and Rome, to William the Conqueror and Alexander the Great, and feel that they are going back to the beginnings of history.

Man’s struggles and victories began hundreds of thousands of years before Alexander undertook his brave expeditions—and those struggles were against greater odds, those victories more inspiring, than any man has known since the time that history was first written.

Let us review in outline the main features in the dramatic story of man during the past million years. In passing from the darkness of our knowledge of the first men down to the dawn of history, we are continually aware of the limitations of available information. We owe an eternal debt of gratitude, however, to the scientists who have contributed fragmentary pages to the book of knowledge, which is the story of man.

Who was the first man, and where did he come from? It is difficult to trace the unwritten record of man, since many of the details lie buried in the earth or are lost beyond recall. During the past few centuries it was believed that the world was created in the year 4004 B.C. and that man was the result of special creation. At the close of the first third of the twentieth century scientific workers have shown absolute proof that hundreds of millions of years passed before any animal that could definitely be recognized as human had evolved upon the earth. Study of both living and fossil forms reveals the fact that a labored evolutionary progress from simple one-celled organisms to many-celled, from fish to amphibians, from reptiles to birds and mammals, was necessary to produce the most advanced form—man.

Branching off from the main primate stock several million years ago, our ancestors possessed many physical characteristics in common with the anthropoid apes. As time passed, the gap between the two branches grew ever wider. We do not know just when or where the first humans evolved, but the evidence, that man did develop in such a manner is undeniable, and gradually the facts are being pieced together to form an increasingly clear picture.

On the northern border of Europe—in England—and on the eastern fringe of Asia—near Peiping—the earliest traces of man have been found. Primate evidence has also been unearthed in Africa; so that even hundreds of thousands of years ago mankind had spread far and wide. The data, consisting of fragmentary human remains, stone tools, animal bones and the charcoal of hearth fires, are still too few to draw any but the crudest picture of the earliest members of the human race. There is abundant evidence of man’s existence a quarter of a million years ago, however, in western Europe. The climate was mild. The elephant, rhinoceros and hippopotamus were the dominant forms of
animal life. The man of that period must have been rugged, powerful-jawed and ferocious in appearance. Small in numbers and physically weak in comparison with the creatures which surrounded them, the earliest hunters were forced to use ingenuity and their powers of reason in order to maintain themselves in a hostile world. They had knowledge of fire, which enabled them to keep off marauding animals at night. They developed the art of flaking flint to a relatively high degree of perfection. With only wooden spears and handaxes for weapons, however, they must have often been more hunted than hunter. It is interesting to recall that these primitive hunters—the Chelleans, as they have been named—could walk from France to England, because at that time the English Channel had not been cut by the sea.

In Field Museum eight large dioramas, with figures realistically modeled by Frederick Blaschke and backgrounds painted by Charles A. Corwin, portray graphically the main stages of man’s development. The first diorama is a Chellean scene in northern France some 250,000 years ago. In the foreground, squatting beside a fire in the shelter of a large rock, are two hunters, one of whom is chipping a flint handaxe preparatory to the hunt on the morrow. In the distance is a meandering river, and on the opposite bank three elephants are frightened from their watering place by the smell of the dense smoke of the fire. Farther upstream a hippopotamus can be seen on the bank. Near the skyline, a magnificent stag, anxiously watching the flickering light, protects his hind from the scent of danger. Stealing through the underbrush, a pack of wolves is barely distinguishable. This moonlight scene recalls vividly man’s plight, as well as his strength, some quarter of a million years ago.

Development during the following tens of thousands of years was extremely slow. A long interval of time found Europe under the effects of a cold climate, the approximate date being 50,000 years ago. The mammoth, reindeer and other cold-loving animals wandered over western Europe. Then Neanderthal man—a new race—made his first appearance. He was about five feet four inches tall, thickset, with a large head and short limbs. The head, thrown slightly forward, was carried in that position by strong neck muscles. To our eyes his face would have had a fierce expression, emphasized by the enormous brow-ridges, small, round eyes and broad, flat nose. It is interesting to note that the lobe of the brain associated with the power of speech was little developed, as compared with that of his modern brother.

Neanderthal man lived in caves or rock-shelters for warmth and safety. A fire, built near the entrance, formed excellent protection against cave-lions, bears, hyenas and other animals. Neanderthal man was probably the first to seize a woman and protect her from animals and other men. This was the beginning of family life—a great step forward!

The struggle for existence was hard, and there was no time for relaxation and the development of the artistic sense. Stone and bone tools show marked improvement in technique. One Neanderthal ceremonial burial suggests a reverence for the departed and a belief in a future life, because a stone weapon was found in the hand of the skeleton, and apparently fresh meat had been placed inside the grave. In another locality charred bones of human beings suggest cannibalism.

The hunters of this period developed the use of fire, a new variety of flint and quartzite implements, the beginning of family life, and they believed in a future existence. Considering these important advances, we must recall with pride the struggles of our Neanderthal predeces-
sors against an inhospitable climate and savage animals.

We now pass rapidly over the next 20,000 years, and find Europe still under the influence of a bitterly cold climate. A new race, called the Cr6-Magnoans, swept into Europe from the plains of Asia. They were of magnificent physique, tall in stature, with a large cranial capacity. During this time the struggle for food became less intense, due to a more abundant supply. As a direct result there was time for the development of a latent artistic sense.

Here was the dawn of art. In their cave-dwellings the Cr6-Magnoans began to adorn the walls with engravings and paintings by means of a flint tool or by application of some colored pigment of red, yellow, black or white. They made accurate reproductions of the animals which they hunted, and occasionally they represented human beings in the innermost recesses of the caves. Personal ornament was also a new development. Necklaces of reindeer teeth, sea shells or fish vertebrae were worn. Ivory beads fashioned from the tusk of a mammoth probably corresponded in value to modern pearls. We find their dead buried with their finest shell ornaments, their most useful tools and weapons, presumably to make an imposing appearance in the new life beyond the grave. In several caves we find the imprint of a red hand on the wall, sometimes with the fingers missing. The motive which prompted this terrible mutilation of the hand is unknown, but we can give some modern parallel instances. For example, in the early nineteenth century travelers among the Bushmen in South Africa recorded that the women cut off their little fingers with stone knives as a sign of mourning. This was to ensure a long career of feasting after death or a safe passage to the next world. Among other tribes, this mutilation was a sign of caste, a tribal mark, or a cure for sickness. Catlin described the removal of the forefinger of the left hand during the initiation ceremony of the Mandan Indians. On the island of Tonga in the Pacific area Captain Cook reported that fingers were sacrificed to propitiate the god Atoa.

At the close of this period the climate grew still colder. Horses and wild reindeer were the chief sources of food supply.

Let us visit one of those caves in southwestern France to examine some of the famous cave paintings. Cave equipment, such as matches, candles, acetylene lamps, ropes and rope ladders, are carried to the mouth of the cave by guides. The lamps are lit and in single file we enter the dark mouth of the cave. It is relatively easy to walk the first few hundred feet. The cave walls are damp and there is a constant drip of water from the roof. The men in front are silhouetted against their swinging lamps and their echoing voices sound weird and eerie. Traveling becomes increasingly difficult and progress slower as we slip and slide on the wet floor. There are places where a rope is necessary to ascend the steep and narrow parts of the cave. By the light of our candles the beautiful stalactite curtains appear majestic. Finally we reach a rock gallery where, in the flickering light, we see the impressive engraving of animals made by prehistoric man many thousands of years ago. It is almost certain that these paintings were inspired by some magico-religious motive. This may be illustrated by the following example: A hunter is going to seek reindeer tomorrow. Food has been scarce and his family is hungry. After dark he goes to the medicine man of his tribe, who leads him into the cave, which fills him with awe. After a long, perilous climb, during which the sound of running water and strange echoes have duly impressed the hunter with the sanctity of his surroundings and the fearlessness of his leader and master, they reach the
innermost chamber. Here the medicine man makes incantations before the picture of a reindeer painted on the wall. To the primitive mind the spirit of the living animal is embodied in the painting. The medicine man therefore has power over the wild reindeer, a power which he transfers to the hunter by means of ritualistic incantations. Next day the hunter goes out with renewed confidence and is successful, as the medicine man has predicted.

We must pass from the development of an artistic sense and appreciation to the next stage, where the dog first became man’s faithful friend at home and ally in the chase. The domestication of animals had begun.

Early Neolithic or New Stone Age times witnessed the first practice of agriculture and the manufacture of pottery, probably by the women. The domestication of animals and the cultivation of plants made settled community life possible. Without these epoch-making developments some ten thousand years ago there could be no great cities. The Neolithic hunters also learned to grind and polish their stone tools. Then came the discovery of the use of metals. First copper, then bronze, iron and steel—the age in which we now live.

We must now focus our attention on part of the “Fertile Crescent,” formerly known as Mesopotamia—the land of the Twin Rivers, the Tigris and the Euphrates. The evidence obtained by three Field Museum North Arabian Desert Expeditions, of which I was leader, indicate that some six or seven thousand years ago the climate of the Near East changed. I believe that the inhabitants of what is now the North Arabian or Syrian Desert were forced by lack of water to become nomads, as are the Beduins to-day; to move westward to the pleasant, watered valley of the Nile, or eastward to the fertile alluvial plain beside the banks of the Euphrates and Tigris Rivers. Under these favorable conditions civilization began. The Field Museum-Oxford University Joint Expedition, excavating at Kish near Babylon, discovered the earliest known tablet—six thousand years old—bearing incised pictographic symbols. There was the beginning of the written record—writing. The oldest wheeled vehicle in the world—a four-wheeled chariot—was also unearthed in a special tomb among the ruins of mud-brick houses and sacred buildings. Evidence of the great deluge—the Flood of Noah—was revealed. Once again scientific research confirms the greatest written word—the Bible. The great temple of worship built by Nebuchadnezzar came to light, to bear silent yet eloquent testimony to the attainments of these makers of history.

In Egypt a different form of civilization was progressing slowly. The story of everyday life in ancient times beside the banks of the Nile has been revealed by the patient and careful study of the archæologist. The great pyramid of Cheops, the Sphinx with its age-old riddle still unsolved, the magnificent stone monuments at Luxor, Abu Simbel and other ancient sites create an inspiring picture of the advanced cultural development of the Egypt of their time.

As we rapidly review the historical period, we recall the great civilizations of classical Greece and Rome and their direct contributions to the thought, word and deed of the twentieth century. In other parts of the world, in China, India and Persia, progress was being made along different lines. Then from the Birth of Christ, until one hundred years ago, the story takes definite shape, in which certain makers of history stand out in bold relief. The last hundred years begin with the great industrial revolution and conclude with the vast modern economic upheavals of worldwide scope. The age of steel brings rapid transportation and communication—speed, speed, speed—wheels of industry spin so fast that western civilization
has become giddy with speed and power. Labor-saving devices and time-saving machines rotate at high speed. What do we do with the time thus saved?

The nation must learn to adjust itself to this added leisure—this time on our hands. Education in its widest aspects is the real solution to this vital problem. If, in our leisure time, we can but realize with an ever-widening knowledge and maturer outlook that in spite of most divergent types all human beings are alike deep under the skin, then machinery has freed us for a worthy purpose. The superb sculptures of racial types by Malvina Hoffman in Field Museum demonstrate wide variations of Caucasian, Asiatic and Negro; but there is a fundamental unity of mankind.

The course of future events can not be predicted. Six thousand years of civilization do not seem to have been sufficient to check the instincts of fear and greed. But, let me say in conclusion, we can recall with pride the struggles of mankind during the past million years. This will give us courage for the future.

WHY TAKE THE SUN FOR GRANTED?

By Dr. DONALD H. MENZEL
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Why is it that almost every one takes fresh air and sunshine for granted? The depression may have partially destroyed faith in the old axiom that the world owes one a living. But it has not diminished the daily supply of breathing material, and the good old ultraviolet rays appear to be about as capable of producing a painful sunburn as in the hectic days of 1929. Every filling station advertises “Free Air.” The public accepts both air and sunshine as “free.” There is a general supposition that they have always been and always will be “free”—whether the date is 1,000,000 B.C., 1935 or 1,000,000,000 A.D. I propound the question: “Have we the right to take the sun for granted?”

As we look back over history we find evidence that men did not always have our present child-like faith in to-morrow’s sunrise or in the return of summer. Certain tribes had special priests, whose duty it was to offer sacrifices to the sun-god who, angry at mankind, retreated southward in the fall, punishing the people with bitter weather. Some of the priests, no doubt, sincerely believed that the return of spring was due solely to their efforts. Others may have been skeptical. If so, their position was not dissimilar to that of the crying child who, when asked the reason for her tears, replied that she wanted to go to the movies. “But,” objected the kindly inquirer, “do your parents ever take you to the movies when you cry like that?” To which the child replied, “Sometimes they do and sometimes they don’t, but it ain’t no trouble to cry.”

What would be your emotions if a radio announcer were to interrupt your favorite program with this report: “Ladies and gentlemen,—we have just received word that the sun has gone out!” Just think what such a catastrophe would mean! That to-morrow would be dawnless! That the earth would henceforth be doomed to perpetual darkness! I hasten to assure you that the sun was shining when I entered this radio station and I have reasonable confidence that it is still shining, though I can not absolutely guarantee it because this broadcast room has no windows—and I am sure that the sun is not infallible.

What if the sun were really to go out!