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*** START OF THE PROJECT GUTENBERG EBOOK THE FIRST DAYS OF MAN, AS NARRATED
QUITE SIMPLY FOR YOUNG READERS ***

The Earth's Story: I

THE FIRST DAYS OF MAN

FREDERIC ARNOLD KUMMER

[ii]



**AFTER MOTHER NATURE HAD SENT HEAT
AWAY TO MELT UP SOME OTHER
WORLDS, SHE CALLED FOR HIS
BROTHER, COLD, AND COLD CAME
RUSHING UP, HIS GREAT WHITE WINGS
GLITTERING WITH FROST.**

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THE FIRST DAYS OF MAN

AS NARRATED QUITE SIMPLY
FOR YOUNG READERS

BY

FREDERIC ARNOLD KUMMER

ILLUSTRATED



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GEORGE H. DORAN COMPANY

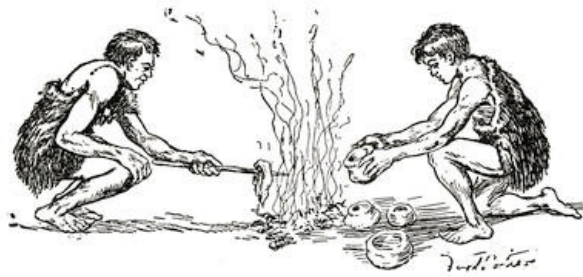
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ACKNOWLEDGMENT

THE Author desires to express his thanks to Dr. William K. Gregory, of the American Museum of Natural History, as well as to the other Museum authorities, for their courtesy and assistance in the matter of illustrations, and in the preparation of the text. The book does not pretend, of course, to be a strictly scientific work. Many liberties have been taken, in order to render the subject interesting to the youthful mind. Man's early inventions did not come about so simply as is pictured in the various chapters. But the development of civilisation is a romance, and only by so treating it can we hope to enlist the interest of the young reader. It is sufficient that the story rests upon a foundation of fact.



PREFACE FOR PARENTS

EVERY child, between the ages of five and fifteen, seeks by constant questioning to grasp the fundamental facts upon which our whole fabric of present-day knowledge is based. These facts, painfully gathered by the human race during its many centuries of development, must of necessity be absorbed by the child within the short space of some ten or twelve years. It is a prodigious task, and one in which the growing mind should be afforded every possible assistance. Two courses are usually adopted by parents; one, to dismiss the child's questions with the stock phrase, "You are not old enough to understand," the other, to place in his hands some so-called book of knowledge, containing, it is true, a great mass of information which the child should possess, but usually so badly presented, so jumbled together, that no one fact has any bearing on another, and thus the child is left to turn from "Why the ocean is salt?" to "What is a lightning rod?" without the least understanding of the principles and laws which underly these and all other facts, and link them together in a composite whole.

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The writer has followed, with his own children, a method of presenting the steps in the gradual development of man which has produced most gratifying results. Instead of treating each fact, each laboriously accumulated bit of human knowledge, as a mere isolated patch in a crazy-quilt of information, he has attempted to arrange them in logical sequence, to form an interesting pattern, so that as the child's fund of knowledge increases, he feels a deeper and deeper interest in fitting each newly acquired fact into its proper place in his mental picture of things.

The result is that the child is constantly building a structure which he understands. His mass of accumulated knowledge is not heaped together hap-hazard, like a pile of blocks, but each occupies its proper and logical place in a slowly developing whole. He derives pleasure from what would otherwise be hard work, just as he would derive pleasure from fitting together the pieces of a puzzle picture; he finds himself progressing toward some understandable end, and without knowing it, he has not only gathered his facts, and catalogued them, but he has begun to think about them, and their relation to each other, in short, he has begun the process of logical thought, which is the first and greatest step in all education.

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In this process of storing away in his brain the accumulated knowledge of the ages, the child's mind passes, with inconceivable rapidity, along the same route that the composite minds of his ancestors travelled, during their centuries of development. The impulse that causes him to want to hunt, to fish, to build brush huts, to camp out in the woods, to use his hands as well as his brain, is an inheritance from the past, when his primitive ancestors did these things. He should be helped to trace the route they followed with intelligence and understanding, he should be encouraged to know the woods and all the great world of out of doors, to make and use the primitive weapons, utensils, toys, his ancestors made and used, to come into closer contact with the fundamental laws of nature, and thus to lay a groundwork for wholesome and practical thinking which cannot be gained in the classroom, or the city streets.

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As has been said, the writer has tested the methods outlined above. The chapters in "The Earth's Story" are merely the things he has told his own children. It is of interest to note that one of these, a boy of seven, on first going to school, easily outstripped in a single month a dozen or more children who had been at school almost a year, and was able to enter a grade a full year ahead of them. The child in question is not in the least precocious, but having

understood the knowledge he has gained, he is able to make use of it, he has a definite mental perspective, a sure grasp on things, which makes study of any kind easy for him, and progression correspondingly rapid.

Too much emphasis cannot be laid upon the fact that methods of thinking are more important, than the particular things we think about. Right thinking is the cornerstone of all mental development. In the writer's opinion it is the great lack in modern education.

FREDERIC ARNOLD KUMMER.

Catonsville, Maryland.

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THE FIRST DAYS OF MAN



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THE FIRST DAYS OF MAN

CHAPTER I

HOW MOTHER NATURE MADE THE EARTH READY FOR MAN

IN the beginning, millions of years ago, before there were any men, or animals, or trees, or flowers, the Earth was just a great round ball of fire, bright and dazzling, like the Sun.

Instead of being solid, as it is now, it was a huge cloud of white-hot gases, whirling through space.

We all know how solids can be turned into liquids, and liquids into gases, by Heat, for we have only to heat a solid piece of ice to turn it into a liquid, water, and if we keep on heating the water, *it* will turn into a gas, which we call steam. It was the same way with all the solid things on the Earth; Heat had turned them all to gases, like steam.

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Then God called Mother Nature to Him and told her to get the Earth ready for Man to live on.

So Mother Nature sent Heat away to melt up some other worlds, and called for his brother, Cold. And Cold came rushing up, his great white wings glittering with frost.

"What can I do for you, Mother Nature?" he asked.

"Blow on the Earth with all your might, Cold," said Mother Nature, "and get it ready for Man to live on." Then she flew away, and as she went she took a piece of the Earth-cloud and rolled it into a ball, and set it spinning in space about the Earth, so that it might cool down later and be the Moon.

When Mother Nature had gone, Cold, who was the spirit of the great outer darkness in which the Sun and Stars move, hovered about the Earth and blew on it with all his might, and as his icy breath swept over the fiery Earth, the hot gases began to get cooler and cooler, and at last they turned back to liquids again. And after that, they got cooler still and began to turn to solids, just as hot melted taffy gets hard and solid when it cools.

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It took Cold a very long time to cool the Earth, millions of years, but he did not mind, for he had nothing else to do. So he blew and blew, and after a while a hard solid crust began to form all over the Earth, very rough and uneven, with high hills and mountains sticking up here and there, and between them great wide valleys and plains, all of solid rock.

When Mother Nature came back to look at the Earth, Cold asked her how she liked it.

"You have done very well, Cold," she said, "but it isn't fit for Man to live on yet, for it is too hot, and there isn't any water. Blow some more, and make Rain."

So Cold blew again, on the great white clouds of steam that came rolling up from the hot Earth, and his icy breath cooled the steam and turned it into Rain, just as the steam from a teakettle will turn to little drops of water if you cool it suddenly. And the Rain fell back on the Earth, year after year, until at last it filled up the great wide plains and valleys between the hills and turned them into rivers, and lakes and oceans. But they were boiling hot.

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"How do you like it now, Mother Nature?" asked Cold.

"It still isn't fit for anything to live on," said Mother Nature. "You must cool it some more. And tell Rain to make some earth for things to grow in. They can't grow in solid rock."

So Cold blew again, harder than ever, and as the cool Rain fell he said:

"Rain, will you please make some earth for things to grow in?"

"Very well," said Rain. "I will."

So Rain fell for days and months and years on the hot rocks, and

cracked and softened them, and each little raindrop as it rushed down the sides of the mountains, carried a bit of soft, crumbling rock down into the valleys, and after a very long time, all these bits of rock-dust which Rain had washed down from the hills formed great wide beds of mud covering the rocky surface of the plains many feet deep.

At the same time that Rain was washing the soft rock down into the valleys to form mud, he also carried down many bits of harder rock, yellow and white, and other colours, like glass. These rocks would not form mud, because they were too hard, but instead they became smooth round pebbles of all sizes, with millions of tiny bits, called sand, and the rivers carried them down to the ocean, and made beautiful clean beaches, as you can see whenever you go to the seashore. And Rain washed many other things out of the rocks and carried them down into the ocean, such as salt. There are great beds of rock-salt all over the Earth, and Rain melted them, and washed the salt into the ocean, and that is why the ocean is salt.

When Mother Nature, who was very busy, came to look at the Earth she smiled, because it pleased her.

"You have done very well, Cold and Rain," she said. "All the rivers and lakes and oceans are full of nice warm water, and all the valleys and plains are covered with soft warm mud, ready for things to grow in. I think I had better speak to the Sun."

So Mother Nature said to the Sun:

"Sun, the Earth is ready for you now. Please make something grow." Then she went away to look after some other worlds she was fixing up.

The Sun looked down at the Earth and smiled as he saw the nice rich beds of mud, and the great wide Ocean.

"Are you ready, Ocean?" he asked.

"Yes," said the Ocean. "I am warm and salt and full of Rain."

"Good. We shall need plenty of Rain," said the Sun. Then he turned to the Air.

"Are you moist and warm, Air?" he asked. "Yes," said the Air. "I am very moist and warm."

"Good," said the Sun. Then he turned to the beds of mud.

"Mud," he said, "you are ugly and black, but you are also full of nice rich chemicals and all sorts of substances we need to make things grow. With the help of Air, and Rain, I am going to cover you with a beautiful carpet of green, so that you will not be ugly any longer."

So the Sun turned his blazing rays on the soft mud and warmed it, and then a wonderful thing happened. Tiny living things, like plants, formed out of the chemicals in the Mud and the Water, and the Air, began to spring up, just as God had long ago planned. They were very small and weak at first, but after a while they grew stronger and stronger, until they had spread all over the Earth, wherever there was mud or dirt for them to grow in. And later on, because the Air was so moist and warm, the way it is in the tropics, and because the Sun was so hot, and there was plenty of Rain, the plants on the Earth grew to be very large and strong. There were ferns, like the little ones we see in flower-pots, as big as trees, and all sorts of tall, rank grasses, and vines, even at the North and South Poles, for in those days, before the Earth had cooled down the way it has now, the Poles were warm, too.

For hundreds and hundreds of thousands of years these great ferns and other plants grew, and died, and fell back into the mud, and as they rotted they made more earth, for other plants to grow in, so that the earth-covering on top of the rocks grew thicker and thicker. In some places the leaves and trunks of these fern-trees got mashed down on each other in thick layers, and became harder and harder, until they turned to coal. Often, in coal mines, the miners will break open a lump of coal and find printed in its surface the exact pattern of the leaf of one of these great fern-trees, just as it fell, millions of years ago.

While all this was going on, Mother Nature, having a little time to spare, came back to take a look at the Earth. It was one of the smallest worlds she had to look after, so she could not give it all her time.

"It is doing very nicely indeed," she said to the Sun. "In eight or ten million years it may be ready for Man. But we must have some fish and other things first. Won't you please attend to it for me, Sun?"

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I am very busy just now looking after some new-born stars in the Milky Way."

"Certainly," said the Sun. "I will attend to it at once." So he turned to the Ocean.

"Ocean," he said, "wouldn't you like to have some fish swimming about in you?"

"Indeed I should," said the Ocean. "I am very big, and I have plenty of room for all the fish you can make."

"Good," said the Sun. "Do you see those tiny spongy growths along the edge of the mud—those funny little things like jelly-fish. I have noticed that some of them haven't quite made up their minds yet whether to be plants, or fish. They have begun to wriggle and squirm about in the mud, and a plant, you know, is supposed to take root and stay in one place. Don't you think we ought to help them to make up their minds?"

"Yes," said the Ocean. "What do you want me to do?"

"Well, suppose you gently wash them loose from the shore, and let them drift for a while in your nice warm salt water. Maybe they will get to like it."

"I'll try it," said the Ocean.

So he did, and after a time the tiny creatures got to like the water so much that they lived in it all the time, instead of just squirming about in the mud. And as thousands of years went by, some of them grew little shell-houses to live in, and some of them fastened themselves to rocks, like oysters, and waited for food to drift right into their mouths, but others grew fins and tails, so that they could swim about in search of something to eat. It took a very long time of course, but after a while, as they grew and grew, and changed and changed, the Ocean came to be full of all sorts of fish, large and small. And the Ocean was very proud of them.

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CHAPTER II

THE FISH THAT GOT STUCK IN THE MUD

WHEN Mother Nature came back to take a look at things she was delighted to see how well they were going.

"The trees and plants and grass are doing nicely," she said, "and so are the fish. Now we must get some animals on land, and you, Ocean, must attend to it for me."

"What can *I* do?" the Ocean asked. "I haven't any animals to put on the land."

"Then you must put some fish there, and I will see that they are turned into animals."

"But fish can't live on the land," said the Ocean. "They haven't any lungs to breathe air with. They can only breathe in the water."

"I know that," said Mother Nature, smiling. "You just do as I tell you, and leave the rest to me."

"What do you want me to do?" asked the Ocean.

"Tell the Wind to blow a great storm, and wash some of your fish up into the salt marshes. And after that, have your waves build a wall of sand along the edge of the marshes, so that the fish and the water you have washed in cannot get out again."

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"I will do it," said the Ocean, "but I do not see any sense in it."

"You will, when I have finished," Mother Nature said.

So the Ocean spoke to the Wind, and told him to blow his hardest, and the Wind howled and shrieked with joy and drove the waves before him, and they danced and rolled up into the great wide marshes and carried thousands and thousands of fish with them. Then other waves came, carrying sand, and with the sand they built a wall all along the edge of the marshes, so that the water in the marshes could not get out again, but stayed there, spread out like a great shallow inland sea.

Then Mother Nature said to the Sun:

"Sun, dry up the marshes, and see what happens."

So the Sun blazed down on the marshes and began to dry them up. It took him thousands of years to do it, for they were very large, but he did not mind that, for he had nothing to do but shine.

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The fish that had been carried into the marshes had a great time, at first, swimming about in the shallow water quite as much at home as they had been in the Ocean. But after a while, as the marshes began to dry up, some of the fish got caught in the mud on the edges, and they couldn't breathe, with their heads out of water, so they flopped their fins in the mud, and tried to breathe the air, and at last, by pushing with their fins, they managed to get back into the deeper water again. Every time this happened, their fins got a little tougher and stronger, from pushing themselves along in the mud, and their lungs got a little more used to breathing air, instead of water, and by the time thousands of years had gone by, and the water in the marshes was nearly all dried up, the great-great-great-grandchildren of the first fish had got so used to breathing air that they did not mind it a bit, and their fins had got so used to rubbing along on the mud that they weren't fins any longer, but had changed to short, strong little webbed feet.

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Mother Nature came and looked at them, and laughed.

"You see, Ocean," she said, "I knew what I was about. Your fish have turned into reptiles. They can live on land as well as in the water, and they have legs and feet."

"How did you do it?" the Ocean asked.

"I did not do it. There is a wonderful law, made by God, which takes care of all such things. No matter what sort of a life any creature is in the habit of living, if you make him live another kind of life, he will change himself to suit it. Your fish couldn't breathe air, when they first tried it, but as soon as they *had* to breathe it, this law I speak of helped them, so that their lungs began to change, and before long, they had grown a new pair of lungs, fitted to breathe air. It was the same way with their feet; the tender fins they used to swim about in the water with weren't hard and tough enough to scrape against the mud and rocks, so they have grown tougher and stronger fins, like little legs, to get about with. You may be sure that

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God knew what He was about when He planned the Universe, and made its laws. You just watch these reptiles we have made, and see what happens to them. I'll be back in a million years or so, and see how things are getting along. We'll be ready for Man pretty soon." Then Mother Nature went away to look after some comets that had gotten lost and were dashing madly through space, trying to find out where they belonged.

The Ocean watched the reptiles in the great salt marsh, and saw many wonderful things. As the water in the marsh got lower and lower, being dried up by the Sun, the mud in the marsh got harder and firmer, and the reptiles in it, who lived partly on land and partly in the water, found after a while that there wasn't enough water left for them all to live in, so thousands of them crept inland, away from the sea, and made their homes in the great fern forests, or among the rocks on the bare hillsides and plains. And no matter what sort of a life they lived, they changed to suit it.

Some made their homes in the soft earth along the edges of the marsh, squirming along on their stomachs, and as they did not need feet and legs to squirm with, their feet and legs got smaller and smaller, until they did not have any at all, and they became snakes. Some dug holes in the hard ground with their feet, to make homes for themselves, and from digging and digging, their feet became very strong, with hard, sharp nails on them. And those that lived under the ground all the time, feeding on the roots of plants, lost their eyes and became blind, because they no longer needed eyes to see with, in their dark burrows, just like the moles we see digging under our lawns to-day. Some, like the frogs and the turtles, stayed in the marshes. The frogs made holes in the mud to live in, but the turtles grew hard shells on their backs, so that they could carry their homes about with them, and sleep on the open ground without any fear that other animals could harm them. Some of the reptiles, who liked the water best, crawled out of the marshes into the rivers, and became crocodiles, and alligators, while those that went inland forgot all about the water, and instead of scales, or shiny skins, like the reptiles, they grew hair on their bodies, to protect them and keep them warm. Some, who took to living in the trees, grew sharp claws, and long legs, to climb with, while others, who did not care for climbing, but ran around on their four feet all day, found that after a time their feet grew very hard and strong, and because they did not use their toes any more, they gradually lost them, and grew hoofs, like the horse, or the deer. And some, who liked the trees better than the ground, because there were always plenty of berries and fruits to be found there, stayed in the tree-tops all the time, and never came to the ground. Their front fins had gradually become larger, from flopping them in the air all the time, and at last, after many thousands of years, these fins became wings, and the trees in the forest were full of birds.

The kinds of food the new animals ate had a great deal to do with their shapes and sizes. Some, like the deer, the huge elephants we call mammoths, and the giraffes, who came later, grew very fond of the fresh green leaves of the trees, and ate them most of the time. The giraffe got into the habit of reaching up so far for the tender leaves that his neck grew longer and longer, until now he has the longest neck of any animal in the world.

Some animals, instead of eating leaves, or fruit, learned to eat other animals, and so their teeth and claws got very large and sharp, and their bodies very quick and strong, like the lions and tigers, so that they could jump upon the creatures they ate and tear them to pieces.

Because the Earth was so warm and comfortable, and there was plenty to eat, some of the animals grew to be very large. There were mammoth elephants, two or three times as large as the elephants we see in the circus to-day, with shaggy hair, and long curving tusks to fight with. And there were animals like lizards, some of them almost as big as whales, and others with long necks, and wings like a bat, that flew about over the marshes, eating smaller animals, or the leaves of plants and trees. As the Earth became cooler, many of these early sorts of animals died out, became extinct, as we call it, and we only know that they once lived, because sometimes we find the bones or skeletons of them lying in beds of clay or rock.



BEFORE MAN

Because the Earth was so warm and comfortable, and there was plenty to eat, some of the animals grew to be very large.

All these changes the Ocean watched while Mother Nature was away, and the laws that God had made to govern the Universe filled him with wonder. Even in his own kingdom of the sea he saw strange things—flying fish, and others that grew swords at the ends of their noses, to spear their enemies with. And he even saw, at the very bottom of the sea, where it is always dark, fish that grew little electric lights like the lights of a firefly, by which they were able to see their way about in the darkness.

When the new animals had spread all over the edge of the Earth, Mother Nature came back to see how everything was going.

"Splendid," she said, when she had looked things over. "The plants, and the fish, and the animals are all doing very nicely indeed. Now we are ready for Man."

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CHAPTER III

THE APE THAT WALKED LIKE A MAN

WHEN Mother Nature told the Sun that the Earth was at last ready for Man, the Sun did not quite understand her.

"What kind of creature is this Man you are always talking about?" he asked.

"Wait and see," Mother Nature replied, "and while you are waiting, just keep your eye on that funny little animal running about there in the woods—the one with the long arms and legs and tail. I'll be back after a while and tell you more about him." Then she went away.

The Sun looked down at the creature Mother Nature had pointed out to him, and saw a queer little animal, covered with hair, and looking somethink like a very small monkey. This animal liked the fruits and nuts of the trees, and spent most of his time in the tree-tops, but sometimes he would go down to the ground, and run about through the thick jungle forests on all four feet, like a squirrel. But when he wanted food, or when some of the fierce flesh-eating animals attacked him, he would quickly climb up into a tall tree. [41]

The trees in those early forests grew very close together, and the little monkey animals found that they could swing from limb to limb with their arms, and thus travel for miles, from one tree to another, without going down to the ground at all. When they first took to living in the trees they had smooth skins like their parents the reptiles, but as thousands of years passed, hair grew out all over them, to protect them and keep them warm during the chilly rains.

For a long time the Sun watched these creatures, while Mother Nature was away, and he saw them slowly change. For one thing they grew larger and stronger all the time, and came to look more and more like the monkeys and apes we find in the jungle country even to-day. But still they were not apes, but from them, both the apes and Man, are descended.

From their habit of swinging from limb to limb, or from strong vines, like a trapeze performer in a circus, these ape-like animals got more and more in the habit of standing upright, balancing themselves on their hind feet on one limb, while they held on with their fore feet to another limb higher up. But still whenever they went down to the ground they ran about on all fours. [42]

If these ape-like creatures had kept on living in the same sort of a place, where the food grew in high trees, and the forest beneath was filled with savage animals ready to eat them up, they would have kept right on being apes. Indeed, most of them have stayed that way, for we find their descendants living in the jungles of the tropics to-day, not very different from the way they were so many hundreds of thousands of years ago. But about that time Mother Nature stopped by to see how things on the Earth were getting along.

"What are those creatures doing that I spoke to you about?" she asked the Sun.

"Nothing, that I can see," the Sun replied, "except playing about in the tree tops, and eating nuts and fruit."

"That won't do at all," said Mother Nature. "We must get them up into the hills, where things will be different. I see some splendid big valleys over there on the mountain side, where there aren't many wild beasts to eat them, and where the trees and bushes are low, and full of nuts and fruit. It is the very place for them." [43]

"How are you going to get them there?" asked the Sun.

"I think I will have Wind blow up a storm, and set the jungle on fire with Lightning. Then, when the fire drives them up the mountain side, some of them will surely wander into the valleys."

So the Wind blew up a great storm, and the Lightning flashed and set the jungle on fire, and all the beasts ran before the flames, afraid. Some went in one direction and some in another, but a few of the ape-like animals ran into the hills, and here they found a wide, peaceful valley, with a stream running through it, and plenty of food about for them to eat, so they took refuge there.

It was not so warm in the mountain country as it had been in the jungle below, because the higher up in the air we go, the cooler it

gets, and we often see snow on the tops of high mountains, even in the middle of summer. And where it is cooler, the trees do not grow so thick and tall and close together as they do in the hot jungle. So the trees and bushes in the valley which the ape-like creatures had found were smaller, and easier to climb than the ones they had been used to, and on many of them the fruit and nuts hung so close to the ground that they could easily be picked without climbing at all. There were no savage animals in the valley, either, for the fierce flesh-eating beasts preferred to stay down in the jungle, where there was always plenty for them to eat.

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The ape creatures had an easy time of it in their new home. When they saw that no enemies came to eat them up, and that there was plenty of food all about, fruit, and nuts, and sweet-tasting roots that grew underground, they began to get out of the habit of spending all their time in the trees. But they still ran about on all fours, like the other animals.

When Mother Nature came along she was very much pleased.

"They are beginning to change already," she said. "See how much larger and stronger they are. But I think I might as well take away their tails."

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"Why?" said the Sun. "It seems to me their tails are very useful things. Some of the monkeys down in the jungle are beginning to use them to help themselves in climbing about in the trees."

"That is all very well for monkeys," smiled Mother Nature. "They need them, for they are going to be monkeys and live in trees all the rest of their lives. But these animals are different. They do not need to climb trees so much now, for there is plenty of food near the ground, and very few enemies about from whom they must escape."

"But," objected the Sun, "a time may come when there will not be any food near the ground, and who knows when some hungry beasts may wander into the valley and eat all your new creatures up?"

"What you say is very true, Sun," replied Mother Nature. "Those things of which you speak are very likely to happen. But I am going to take away their tails just the same, for it would never do to have them turn into monkeys, like the creatures down in the jungles. These animals are going to be different. For one thing, they must learn to walk about on their hind feet, instead of running on all fours, like the other beasts. And to teach them that, I have got to keep them out of the tree-tops. If they haven't sense enough to find some way to get food, and protect themselves from their enemies, they will surely starve, or be eaten up. But I am certain they will get along."

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So the ape creatures lived happily in their wide valley, picking the fruit and nuts from the low bushes and trees, and sleeping safely in grassy beds on the ground, and because Mother Nature did not think they needed tails, she took them away, just as her great laws had taken away the feet of the snake, and the eyes of the mole, when they were no longer needed. As the years went by, and new generations of apes were born, their tails were smaller and smaller, and finally, when a very long time indeed had passed, they were born without any tails at all.

The Sun watched, for hundreds and thousands of years, and he saw that after a while the whole valley came to be full of the new creatures without tails. At first they ran about on all fours, picking food, or climbing the trees, the way they had always done, but because there were so many of them to be fed, it often happened that food on the bushes became scarce near the ground, and the ape creatures had to stand up on their hind legs in order to reach it. After a while, from standing up on their hind legs so much, they got used to it, and came to like it, and walked about that way most of the time.

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The Sun saw this strange sight of an animal walking about, upright, on its hind legs, instead of running about on all fours, as all the other animals did, and because he had never seen such a sight before, it surprised him very much indeed.

"Is he a Man, Mother Nature?" he asked.

"No," Mother Nature told him. "He is not a Man yet."

"Why not?" said the Sun.

"Because he has not yet learned to think. He is just like all the other animals so far. But I am going to make him think very soon, and when he does, he will begin to be a Man."

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"How are you going to make him think?" the Sun asked.

"I am going to make him hungry."

"Will that make him think?"

"Yes. If he needs food to keep himself alive, and doesn't find it right at his hand, he will have to think of a way to get it, or starve. And I don't believe he will let himself starve. You see, Sun, I have tried the same thing over and over, on a great many other worlds, and the laws that God has made always work."

Then Mother Nature sent for Cold and had a talk with him.

"Cold," she said, "I want you to get to work and cool the Earth off a little more quickly. Those animals down there are much too comfortable."

"Very well," said Cold, flapping his great frosty wings. "Just watch me make them shiver and shake."

Then Mother Nature went away, but as she went, she gave the Earth a little push, very gently, so as not to disturb things too much. And the Earth, which had been spinning around perfectly straight and upright, like a huge top, now leaned over a little, as it went swinging around the Sun.

"What did you do that for, Mother Nature?" asked the Sun.

"I did it, Sun, to make the Seasons. From now on, instead of it being warm all the time, there will be Winter and Summer on the Earth."

"How will tipping the Earth over like that make Winter and Summer?" the Sun asked.

"It is very simple. As long as the Earth swung around you in an upright position, your rays struck upon it just the same way the whole year round. Now that I have pushed it over a little, so that it no longer stands upright, don't you see that for half the year you will shine more strongly on the lower part of the Earth, which is turned toward you, and less strongly on the upper part, which I have tilted away from you. That will make Summer on the lower part of the Earth, where you are shining brightest, and Winter on the upper part, where you are shining least."

"I see," said the Sun, looking down at the Earth. "I can't reach the part that is turned away from me so well."

"Exactly. But six months from now, when the Earth has swung halfway around you, and is on the opposite side of you, the part that is now turned away from you will be turned toward you, and it will be Summer there, while the part that is having Summer now, will then be having Winter."

"It is very interesting," said the Sun, "but I still don't see what you did it for."

"I did it to help make my Man think," said Mother Nature, as she went away.

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CHAPTER IV

THE HUNGRY APE AND THE BUNCH OF WILD FRUIT

IN the valley where the Ape-Men lived the weather began to get colder and colder, year after year, and they were having a hard time to find enough to eat. There were thousands and thousands of them, now, and there were not enough roots, and berries, and nuts, and birds' eggs to go around, so the Ape-Men were often hungry.

One morning a young ape went out to try to find something for breakfast. He had not eaten a thing since the afternoon before, and then all he had was a handful of dry shrivelled berries, and he was almost starving.

He went all through the valley, hoping to find some of the sweet golden fruit that used to be so plentiful, but he could not find any, for the other apes had picked it all.

At last, climbing over the steep rocks at the upper end of the valley, he came across a tree which bore the kind of fruit he liked so much. At first he thought it was empty, but soon, to his delight, he discovered three large and beautiful bunches far out on the end of a slender limb. [52]

His first impulse was to climb out on the limb and gather the fruit, but when he got about halfway out, the slender limb began to crack, and looking down he saw that it hung over the edge of a high, steep cliff, and that if he fell, he would be dashed to pieces. So he got back off the limb in a hurry, and came down to the ground.

The next thing he did was very stupid, but he had not yet begun to think. He took a stone and threw it at the fruit, as he had often done before, and knocked one of the bunches down. It fell over the edge of the cliff and was dashed to bits on the rocks below, far out of his reach.

By this time the ape had tried all the things he knew, and as he could not think of anything else to do, he sat down and gazed at the fruit for a long time in silence. There were tears in his eyes, for he was very hungry, but he could think of no way to get the fruit.

Mother Nature, who was watching the efforts of her Ape-Man, pointed him out to the Sun. [53]

"You see, Sun," she said, "now that the cold has made food so scarce, my children in the valley are getting very hungry. That poor creature down there actually has tears in his eyes."

"He may be hungry," said the Sun, "but I don't see that it has made him think, the way you said it would."

"He is doing his best," said Mother Nature. "You see, he hasn't much of a brain to think with, but what little he has is trying very hard to find a way to get that bunch of fruit for his breakfast."

The Sun laughed.

"How stupid your Ape-Man is," he said. "There is a splendid big stick lying in the grass right under the tree, with a hook at the end of it where a limb has been broken off. All the foolish creature has to do is to take the stick in his hands, pull the bunch of fruit toward him with it, and he will have his breakfast. It is very simple and easy."

"It may seem easy to you, Sun," said Mother Nature, "but it isn't easy at all to a poor creature who has never thought before in all his life. It has taken millions of years to bring this Ape-Man from the mud and slime of the Ocean, to where he is now, but all that was not so hard, as it is to make him pick up that stick and gather that bunch of fruit. If he does it, he will have had an idea for the first time in his life; he will have begun to think, and from now on he will not be an animal any longer, but a Man." [54]

"Couldn't we help him in some way?" asked the Sun.

Mother Nature looked down at the Ape-Man sitting beneath the tree.

"Suppose you shine very brightly on the stick, Sun," she said. "It may make him notice it."

So the Sun shone very brightly on the stick, but the Ape-Man did not move, but sat gazing at the fruit.

"Wait," said Mother Nature. "I will try something else. There is a snake lying among the roots of the tree. I will make him crawl over

the stick and move it a little. Then perhaps the Ape-Man will notice it."

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So Mother Nature called the Wind to her, and told him to blow gently against the tree and cause some dead limbs and twigs to fall. The Wind blew, and snapped off some little twigs, and one of them fell near the snake and woke it up. Then the snake squirmed off, and in doing so he moved the stick a little, so that the Ape-Man, whose eyes were very sharp, noticed it as it glistened in the sun. He got up from where he was sitting, and went over to the stick and gazed at it stupidly for quite a while.

"Goodness, how slow he is," said the Sun. "Hasn't the creature any brains at all?"

"Not much," replied Mother Nature, "but I think he has an idea at last—just a faint little idea moving about in his brain like a shadow. See, he is going to pick up the stick."

The Sun looked, and saw the Ape-Man take the stick from the ground. He held it in his hand for several moments, looking at it. Then he looked at the bunch of fruit, and after that, he looked back at the stick again. When he had done this two or three times, he took the stick, and going to the edge of the cliff, poked awkwardly at one of the remaining bunches of fruit.

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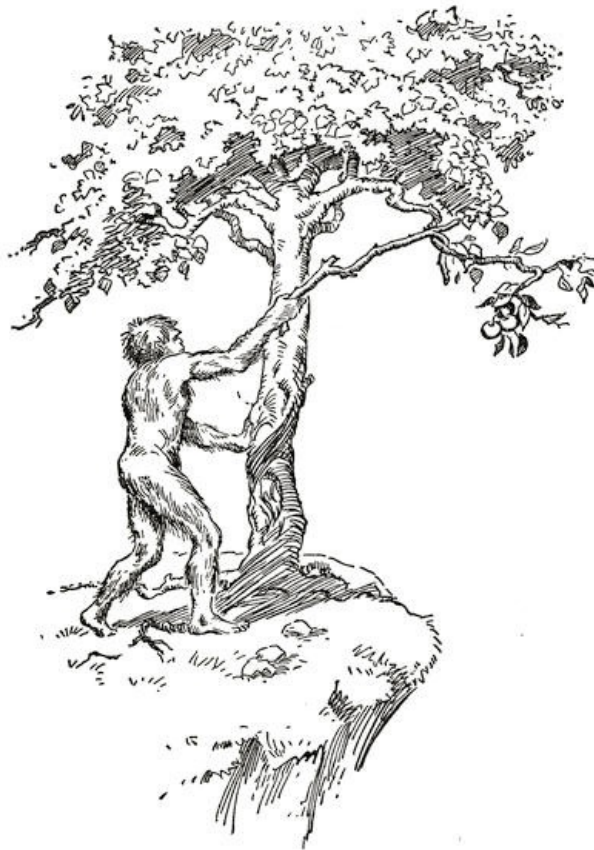
"He had better look out," said the Sun, "or he will knock that one down and lose it too."

He had no sooner spoken, than the heavy bunch of fruit fell from the limb and dashed to the rocks far below. The Ape-Man gave a long cry of anger and disappointment. Then he began poking at the third and last bunch. But this time he was more careful. After a few moments the hook at the end of the stick caught around the limb, and when the Ape-Man pulled on it, he saw that the fruit began to move toward him. He chattered with joy, at this, and pulled harder and harder, and at last the slender branch bent until the bunch of fruit was right in his hands. Then the Ape-Man dropped the stick, and sitting down on the grass ate the fruit as quickly as he could. After that he threw himself down in the grass and went to sleep.

The Sun, who had been watching him carefully, laughed.

"Such a little thing, to make so much fuss about," he said.

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THE FIRST THINKER

The hook at the end of the stick caught around the limb, and when the Ape-Man pulled on it, he saw that the fruit began to move toward him.

"It may seem a little thing to you, Sun," said Mother Nature, "but it is really the biggest thing you have ever seen in your life. For the first time, you have seen the birth of a Man. He is very slow and clumsy and stupid, now, but after a while his children and his children's children are going to become so strong and cunning and powerful by means of their little brains, that they will rule the Earth, and all the other animals will be afraid of them, and bow down to them. And they will harness the Wind, and the Rivers, and the Lightning, and cause Heat and Cold to do their bidding, and they will defy the Ocean, and conquer the Air, and make even you, Sun, work for them and serve them."

"Ha-Ha!" laughed the Sun. "Those little Ape-Men make me work for them! I don't believe it."

"Wait and see," said Mother Nature. "I know what I am talking about, for I have seen the same thing happen, many times, in other worlds that you know nothing about. And Man will do all these things I tell you of, because God has given him a brain and taught him to think."

"How has God taught him to think?" said the Sun. "It was the fruit, and the snake, and the Wind, and you and I who taught him."

Mother Nature looked at the Sun and frowned.

"Don't you know, you foolish Sun, that God made the fruit, and the snake, and the Wind, and the Earth, and you, and everything else in the Universe, and that if it were not for His laws, you wouldn't be here at all. You had better go on shining, and not make foolish remarks about things you do not understand." Then Mother Nature went away.

The Ape-Man, asleep in the sun, woke up after a time, and feeling thirsty he went down to the stream in the valley to get a drink. But he took the stick he had used to get the fruit, with him. It was a nice stick, straight and strong, like a spear, except for the short hooked limb at the end of it, and the Ape-Man liked it, because it had helped him get something to eat.

When he went back that night to the place in the grass where he usually slept, some of the other Ape-People crowded about him, chattering in surprise at seeing him carrying the stick, for this was something none of them had ever done before. One of the crowd tried to take the stick away from him, but he drew back and hit the other over the head with it and knocked him down. After that the others were afraid of him, and let him alone. And although the Ape-People had no language, and did not know how to speak as we do, they used different kinds of cries and grunts, when they were angry, or cold, or afraid. When anything frightened them, they uttered a cry that sounded like "Adh!", and because they said this whenever the Ape-Man with the club came among them, it grew to be a sort of name for him, and he shouted it out to terrify them, when he made his way through the woods.

After a while, others of the apes got clubs too, and used them to fight with, but except the stones they sometimes threw, Adh's stick was the very first weapon used by Man.

Mother Nature was satisfied with her new Man, so far as he had gone, but she knew that he would have to suffer, if he was to learn, and although she did not like to make him suffer, she had to do it.

"You can blow all you like, Cold," she said. "I want my people to suffer. Pain is not a pleasant thing, but it is only through pain that they will ever learn."

CHAPTER V

THE CAVE AND THE FISH

A COLD wind blew through the valley where the Ape-Men lived, and the trees and bushes were brown and bare of fruit. The rays of the Sun, which used to come down straight and hot all day, now shone slantwise, because the Earth had been tipped over, and they seemed to have very little warmth. The days, too, were shorter, and the nights were longer, and cold. All the Ape-Men were obliged to huddle together in their beds of grass to keep warm. They did not know that Mother Nature had tipped over the Earth to make Winter and Summer, but they were very uncomfortable, and they did not like it.

But the worst thing of all was, that there was almost nothing to eat. Always before there had been some kind of fruit, or berries, all the year round. Now they were able to find only a few nuts, and the sweet bulbs which grew at the roots of certain plants, and the smaller animals got most of these. Even the nesting birds they sometimes caught and ate had gone where it was warmer. Pretty soon there was nothing to eat at all, and the Ape-Men were starving.

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Adh, who had begun to think a little, puzzled about this for a long time, but could not understand it. Of course, if the Ape-People had stored up food, during the Summer, they would have had something to eat, when the cold weather came, but they had never thought of doing such a thing, because there had usually been enough to eat, before. Now they did not know what to do, and as they could no longer find any food in the valley, they gradually wandered off, down toward the low, hot jungle-lands from which they had come. Here they found things to eat, but they also found lions and great sabre-toothed tigers and other fierce beasts to eat them, and as they had long ago forgotten their old trick of living and sleeping and seeking safety from their enemies in the tree-tops, it was not long before they were all eaten up.

When the Sun saw this, he was very much surprised.

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"Look, Mother Nature," he said. "Your Ape-People have all been eaten up."

"You are wrong, Sun," replied Mother Nature. "Adh and the ape woman he has taken for his wife are still in the valley. He was the only one who had learned to think, so the others were of no use and I had to get rid of them. Before long the children of Adh and his wife will fill the valley with a race of Men, and from there they will spread all over the Earth."

Adh did not go with the others for two reasons. The first was that they did not like him, because he made them afraid of him, and so they went away without him. The second reason was, that Adh's wife had a tiny baby boy to nurse and take care of, and it was easier, to stay where they were, than to wander off through the jungles. Now that all the others had gone, Adh managed to find enough roots and nuts to keep himself and his little family alive.

Soon after the others had left, it began to rain, and every day the cold rain beat down on Adh and his family and drenched them. Even their grass nest under the boughs of a thick tree, was turned into a pool of mud and water, on which the sun never shone to dry it and keep it warm. Cold and Rain were making the new Ape-Man suffer, as Mother Nature had told them to do. Adh, as he wandered about the valley hunting for a little food, tried very hard to think of a way to keep himself and his family comfortable, but no new ideas came to him. Occasionally he managed to catch a young bird, which he greedily devoured, but they were very scarce and hard to find.

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"Look at the stupid creature," laughed the Sun, peeping for a moment through the heavy rain-clouds. "He hasn't sense enough to find a hole in the rocks, where he would be dry and warm."

Mother Nature did not answer. Instead, she waited until she saw Adh climbing over the rocks at the upper end of the valley, searching for the nests of wild birds he sometimes found there. Then she called Cold to her.

"Blow your hardest for a few moments, Cold," she said.

Cold puffed out his cheeks and blew a freezing blast down the valley, and all the falling drops of Rain turned to bits of ice, like hail,

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which cut Adh's shoulders and arms and back, and hurt him, in spite of his thick coat of hair. To escape from the storm, he ran beneath some overhanging rocks, and suddenly found himself in a little cave, its floor covered with soft dry moss. Here he was quite safe from the hail and rain, and he was very much pleased.

While he was standing in the cave, Adh suddenly had another thought. He wished that his wife and child were with him. And no sooner had he thought of them than he dashed out of the cave, and forgetting all about the hail and rain, he ran to the nest in the grass where they lay trying to keep warm, and brought them as fast as he could back to the nice dry cave. And this cave was Man's very first home.

"You see," said Mother Nature to the Sun, "whenever I want my new Man to think, I send him some kind of trouble. If I hadn't made him hungry, he would never have got the idea of pulling the bunch of fruit out of the tree with his stick, and now, because I made him cold and wet, he has found himself a home."

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"What are you going to make him do next?" asked the Sun.

"Wait and see," said Mother Nature. "But don't forget that I have given him a wife and child to think about, now, and he will do more, on their account, than he would ever do, alone, for in his simple way, he loves them."

"What is Love?" asked the Sun.

"It is one of the great laws of the Universe, that God has made, a feeling, or instinct, that causes all His creatures to want a mate to live with, and thus have children. If it were not for this law, there would never be any children, and all the living creatures on the Earth would disappear in a very little while."

"This Love must be a very queer thing," said the Sun. "I do not understand it."

"And yet, Sun, you will see, some day, that it is the most wonderful law that God has made. Without it, Man would never amount to anything at all. From now on my creature Adh is going to think of doing a great many things, because of his wife and child, that he would not think of doing without them."

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When Adh got his wife and child into the cave, they were no longer cold and wet, but they were still very hungry, and all day long the Ape-Man wandered through the valley, looking for something to eat. Sometimes, when all he could find was a few dried berries, or a handful of little grains from the tall grasses that grew here and there, he would carry them back to his wife, instead of eating them himself. In the past, before he had any wife, he would never have thought of such a thing as going hungry for the sake of some one else, but now it was different; he thought of his wife and child.

At last there came a day when from morning to night he could not find a single scrap of food. Everything was gone, and he was weak from hunger. He went down to the shore of the little lake that lay in the bottom of the valley, and throwing himself on the ground, drank as much water as he could, to fill his empty stomach. Then he sat up and stared at the cold, grey sky, not knowing what to do. Presently he saw a great bird, like a fish-hawk, swoop down to the surface of the lake, and rise a moment later with a shining fish in its claws. Then, as Adh watched, another hawk flew up and tried to take the fish away from the first one. The two birds screamed and tore at each other, and as they fought, the fish the first one had been carrying fell to the ground close to where Adh was sitting.

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He walked over to where it lay, and picked it up, more from curiosity than anything else, for he had never thought of such a thing as eating a fish. For thousands of years his parents before him had eaten nothing but fruit, and roots, and nuts, with occasionally an egg or a young bird, and he had always done just as they had done. He did not know that the flesh of fish, or animals, was good to eat.

As he held the fish in his hands, he smelt the fresh blood from the wound made by the claws of the fish-hawk and it made him hungrier than ever. Half starved as he was, he could have eaten anything, and without thinking any more about it, he tore the fish apart and put a piece of it in his mouth. It tasted strange to him, and he did not like it, but his stomach was very empty, and almost before he knew what he was about, he had eaten the whole fish.

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After that, he felt better, and sat on the edge of the lake for a

long time, watching the fish swimming about in the shallow water. Then he thought of his wife. She would want something to eat, too. How could he get another fish? He tried for a long time to catch one in his hands, but they were too quick for him.

Then he thought of his club, and taking it in his hands, he did his best to hit one of the fish with it, but every time he failed. Once he struck so hard that the club was splintered against a rock, and the heavy end of it broken off. Adh looked at the piece left in his hands and felt sad, for he loved his club, and always carried it about with him. Pretty soon he noticed, as he felt the broken and splintered end of the stick, that it was very sharp, and he thought to himself, why could he not drive the sharp end into the back of one of the fish, as it lay in the mud. It took him a long time to do this, but by lying among the rushes, and keeping very quiet, he finally succeeded. Reaching down, he seized the fish he had speared in his hands.

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"Look!" said Mother Nature to the Sun. "My new Man has made himself a spear."

When Adh gave the fish to his wife, she did not understand what he wanted her to do with it, but finally, by chattering, and making signs, he got her to eat a little of it. The new kind of food made her rather sick, at first, but after a while, as there was nothing else to eat, she made a meal of it, and from then on Adh went to the lake every day and speared a fish or two for their dinner. By the time the cold rainy season was over, and the warm weather had come again, he and his wife had grown quite used to eating fish, and had even got to like it.

Mother Nature watched all this and smiled to herself.

"See how quickly my Ape-Man is learning to think," she said to the Sun. "Already he has found a home, and taught himself to get food from the rivers and lakes, instead of from the trees and bushes, and he has made himself a spear. I knew he was not going to let himself starve."

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THE WOODEN SPEAR

Reaching down, he seized in his hands the fish he had speared.

"What is he going to do next?" asked the Sun, who was getting very much interested in the funny little Ape-Man.

"I think I shall teach him to fight," Mother Nature said.

"To fight? What for?"

"So that he can protect himself against his enemies. When I took away his tail, you said he would either starve, or be eaten up. Well, he hasn't starved, and I can't let him be eaten up. He will have plenty of enemies, before he gets through, and if he doesn't know how to fight, they will destroy him."

"Will this thing you call Love help him to fight?" asked the Sun.

"Yes. He will fight twice as hard, because of his love for his wife

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and child. If you don't believe it, just wait and see."

CHAPTER VI

ADH'S FIRST FIGHT

WHEREVER he went, Adh carried about with him a club. He had found himself a new one, now that his first was broken, and this new club was short and heavy, with a great hard knob on the end of it, as big as his two fists. He had broken it from the limb of a tree, and rubbed and polished it on the rocky floor of the cave until it was hard and smooth. Besides the club, he had made himself a long straight spear, with the end of it rubbed to a point against the rocks. He used the spear for getting fish, and had become so skilful that he hardly ever missed them.

One night, when the cold rains were over, and the trees in the valley were covered with fresh new leaves, Adh was sitting on a flat rock in front of his cave, eating a large fish.

He was not thinking of anything, except how good the fish tasted, when suddenly his quick ears heard a sound, and looking up he saw a great beast, like a bear, covered with hair, making its way slowly up the rocky hillside toward him. [77]

It was a huge, clumsy animal, much larger than himself, but it walked on all fours, snuffing the air as though it smelt the fish Adh had been eating. The Ape-Man had never seen such a creature before.

The hair on Adh's neck stood straight up, for he was very much frightened, and his first thought was to run away as fast as his legs would carry him. Then he remembered his wife and child, lying asleep inside the cave, and instead of running away, he picked up some heavy stones and threw them at the oncoming enemy.

One of the stones hit the beast on the shoulder, but instead of stopping, it gave a grunt of rage and came on faster than ever, straight toward the cave.

Adh picked up his club from where it lay on the rock beside him and stood before the door of the cave, chattering and screaming with anger and fear. His wife, awakened by the noise, came out of the cave and stood just behind him, holding the young one in her arms, and also uttering shrill cries. [78]

The creature's black snout, with small fiery red eyes, came slowly forward until Adh could feel its breath on his face. Then, just as the beast started to rear up on its hind legs, Adh raised his club, and springing forward, struck the animal across the nose with all his might.

The Ape-Man was very strong, and his blow was a terrible one. The great beast gave a howl of pain, and rearing up, tried to reach Adh with its huge claws. But Adh's fear had all left him, now. His eyes gleamed, and his mouth foamed with rage. Raising his club he struck again and again, until the beast, with blood streaming from its crushed snout, turned tail and ran away down the rocky hillside. There was a great deep wound in Adh's breast, where the claws of the beast had torn him, but he hardly knew it, in his joy at winning the fight. He pounded his clenched fist on his chest until the sound echoed through the valley, and uttered shrill cries of defiance. [79]



THE CAVE MAN'S FIGHT WITH A BEAR

The great beast gave a howl of pain and, rearing up, tried to reach Adh with its huge

His wife came up to him and stroked and patted him proudly, chattering all the time with pleasure. This made Adh feel very happy, and he pounded his club on the rocks and grunted with delight. He had made this great beast fear him, and the thought filled him with pride.

That night, as he lay on the floor of the cave, a terrible fear came over him. What if the creature should come back again, while he was asleep, and carry him off. He got up, and crouched for a long time in the door of the cave, his club ready in his hands. After a while he grew sleepy and wished that there were something across the cave door to keep the beast out, in case he came back. The thought worried him so much that at last he went out, and getting four or five large stones, rolled them to the mouth of the cave, and after crawling inside, fixed them so that the hole by which he crept in and out was almost blocked. After that he went to sleep without feeling afraid.

The next morning he followed the bloody trail of the beast over the rocks, but lost it far down the valley. The creature had disappeared. Adh went on spearing fish and forgot all about his enemy. From that time on, Adh often had to fight for his life and that of his wife and child, but he was not afraid.

As the years went by, his boy grew up to be strong like his father, and very smart and quick, and when he was old enough, Adh got into the habit of taking him along when he went down the valley after fish, or to gather fruit or nuts. The boy carried a spear, like his father, and used it very skilfully, so that the little family never wanted for food. There were other children, now, and later on, grandchildren and great-grandchildren, and Adh had made the cave bigger, by scraping away the soft rock of the walls. Each year, with the coming of the warm Spring, the rains ceased, and all the trees and bushes in the valley were soon covered with bright new leaves, and later, with blossoms and fruit. Adh and his family were very happy.

The oldest boy they called Kee, because when he was very young he always said "Kee-Kee" when anything pleased him. And before long the cries or grunts they used for the things they saw about them, such as fruit, or fish, or the Sun, the Rain, or the cave, came to be used over and over, and in this way they began to have words for things. There were not many words at first, but Man had invented speech, which was something none of the animals had ever done.



THE HOME OF EARLY MAN

The first houses built by man consisted of boulders piled up to form a cave and covered with sod. The one shown below represents the earliest attempts with rough, unhewn stone. Above is a stone house of later date showing that the boulders had been hewn for the purpose.

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Mother Nature watched the progress of her children with a smile.

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"Just see," she said to the Sun, "how quickly they are learning. Did I not tell you that Love would teach my Ape-Man many things? If he had not loved his wife and child, he would have run away when the bear came to attack him, but because of them he stayed, and fought. And he has made a door to his cave, to keep his enemies away, during the night."

"What are those strange grunts and cries I hear them using?" the Sun asked.

"They are beginning to make a language," Mother Nature replied. "Before long, they will be able to say many things to each other, and be understood. They are certainly doing very well. I hope nothing happens to them."

"It seems to me they are awfully slow," said the Sun.

"Not at all. Think how many thousands of years they have ahead of them. There is no hurry, you know. The Earth is only a hundred million years old. They have plenty of time. I think I shall go away now, and take a look at another sun I am making, many times bigger than you are. I shan't be back for several thousand years. Good-bye."

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"Good-bye," said the Sun, in a surly voice, for it made him very angry to think that there were any suns in the Universe bigger than he was.

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CHAPTER VII

RA MAKES A NEW SPEAR

ADH had been dead a long time, now, and Ra was his great-great-great-great-grandson. He was called Ra because that was the word the Ape-Men used to mean big, or strong, and Ra was the strongest boy in the valley.

He lived with his mother and father and several brothers and sisters in a cave high up among the rocks, and because his father was lame, Ra had to do most of the work for the family. He knew how to say a number of words, queer little cries and grunts that meant things, and the hair on his body was not as thick and shaggy as Adh's had been. The Ape-People had been living in caves, protected from the weather, for a long time now, and as they did not need so much hair to keep them warm, the great law of Nature we have heard about before, had begun to take their hair away from them. But it was not until Man began to wear clothes that he really lost his coat of hair.

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There were many Ape-Men in the valley now, descendants of Adh and his wife, and they had hollowed other caves in the soft rock and earth of the hillsides at the upper end of the valley, digging with sharp-pointed sticks and stones. They lived on raw fish, and fruits, roots and nuts, just as Adh and his family had done before them, and the eggs of wild birds, and the young fledglings, which they found in nests among the trees and rocks. They carried long wooden spears, and clubs, and were quick and strong. And because there were plenty of fish in the stream, and in the lake at the lower end of the valley, even during the cold rainy season, they had never thought of storing up food for the Winter. Of such things as clothes, or fire, they knew nothing at all.

There were high, rough hills, covered with thick forests, all about the valley, except at its lower end, where the great lake spread out, pouring its waters into the country below through a narrow gorge between two hills. Because the valley was protected in this way, few enemies came into it to attack the cave men. When one appeared, as sometimes happened, the hunters, with their clubs and spears, would attack it in a body, and while it often happened that some of them were killed, they usually were able to overcome the intruder in the end, or drive him from the valley. The most terrible of these enemies was the sabre-toothed tiger, larger than any tiger you have seen in the circus, with two long sharp teeth or fangs, curving down like sabres from his upper jaw. When this terrible beast appeared, the cave men usually hid in their caves, afraid.

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Once, when Ra was about twenty years old, a huge beast like an elephant, with long shaggy hair and great curving tusks came splashing up along the marshy shores of the lake, and began to strip and eat the tender leaves and fruit from the young bushes and trees.

Ra, who was spearing fish at the upper end of the lake, had never seen such a creature before, and when he caught sight of it coming towards him he was very much frightened.

He quickly gave the alarm, and soon twenty or more of the cave men ran up, and surrounding the huge creature, began to attack it by throwing stones at it, at the same time making a loud noise, hoping to scare it away.

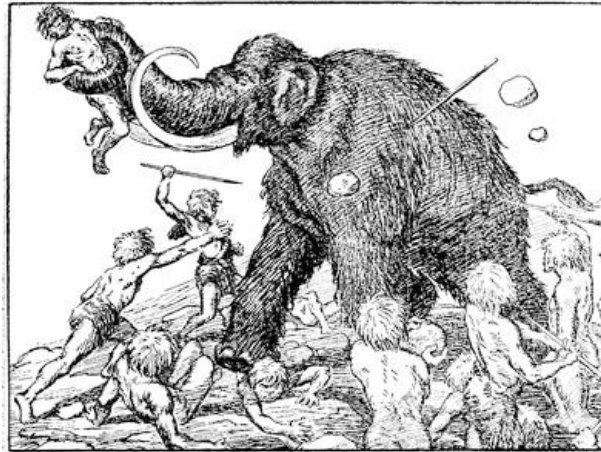
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The great creature did not mind the stones, at first, for he scarcely felt them, as they bounced from his thick, hairy sides, but soon one of the stones struck him near the eye and hurt him, and he turned on the cave men with a snort of pain, waving his long trunk about in the air.

When the cave men saw him coming they did their best to get out of the way, at the same time striking with all their might at his huge sides with their spears. The spears, however, with their wooden points, while strong enough to pierce a fish, were of no use against the elephant's tough hide, and fell back blunted or broken. Ra, as he saw the great beast coming toward him, its little red eyes gleaming, its long trunk swinging to and fro, drove his spear with all his might at its flank but the point was splintered from the blow and he barely escaped with his life. Three of his companions were trampled to death by the savage creature as they tried to escape, and two more were seized in its great trunk and crushed. The cave men,

frightened, ran back to their caves and sat there, helpless, until the animal, unable to find them, had eaten his fill of the leaves and fruit, and gone away, leaving a trail of stripped and broken bushes and trees behind him.

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THE FIGHT WITH A MAMMOTH

The cave men did their best to get out of the way, at the same time striking with their spears.

Ra worried a great deal about this fight. He was very angry with the beast because it had killed one of his brothers, and he could not understand why his spear had failed to pierce the elephant's hide. Its point, rubbed sharp on a rock, had always been strong enough to kill the largest fish, but now it was blunt and broken, and Ra did not like it any more.

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As he sat in the sun before the cave, trying to cut a new point to his spear with a stone, an idea came into his head. Why could he not in some way fasten the stone to the end of his spear? The stone, he knew, was hard enough not to break against the toughest hide. It was a large and clumsy stone, however, and Ra soon saw that he could do nothing with it.

The thought pleased him, but he said nothing to any of his friends about it. Instead, he hurried off to a place on the shore of the lake where a few days before he had seen some very sharp flat stones, quite different from the clumsy bit of rock he had found near the cave.

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He gathered several pieces of this stone, and amused himself by striking them against each other and breaking them. At last he got what he wanted, a flat, narrow piece, shaped something like the leaf of a tree, and about as long as his hand. The stone was very hard, and it took him hours to chip and rub it down until it had a sharp point. When at last it was done, he had another thing to think about. How was he to fasten the stone to the end of the spear?

He took the spear and looked at it. The blow he had struck against the elephant's side had split the end of it. After a great deal of trouble Ra managed to force the thin flat stone into the split end of the spear. It looked very well, he thought, but he knew it would not stay there unless it were fastened in some way. Glancing about, he saw some of the long, tough marsh grasses that he had often used to string his fish together, when carrying them home. He took some strands of this grass and wrapped them around the end of the spear in such a way that the stone point was held tightly in place. It was a clumsy piece of work, for Ra had never used the grasses in such a way before, but it was strong, as he found out by spearing several fish in the shallow water of the marsh. When he went home, he was very proud of what he had done, and showed the new spear to his father, and to some of his brothers.

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THE BEGINNING OF THE STONE AGE

Ra's invention of the stone-pointed spear gave the cave men new courage so that they became very fierce and bold.

His father did not think much of it, and said wooden-pointed spears were good enough for anybody, but his brothers chattered with pleasure, and got Ra to show them where he had found the white stone, and how he had chipped the spear point into shape, and fastened it on. Before long, they too had stone-pointed spears, and as they made more and more of them they made them stronger and better, using the twisted entrails or guts of fish to bind the points in place, instead of the marsh grasses. Soon all the men in the valley were armed with stone-pointed spears, and some of them, taking Ra's idea, fixed stones in the ends of their heavy clubs, and with the making of these stone-pointed spears and axes, Man had begun what is known as the Stone Age.

Ra's invention was a great blessing to the cave men, for now they were able to fight their enemies on much more even terms. This gave them new courage, and they became very fierce and bold. But it was not only for making weapons that they began to use the hard, sharp bits of flint Ha had discovered. They soon found them useful for many other things. It was easier, to cut a fish to pieces, with a sharp-edged stone, than to tear it to bits with their fingers, so they began the use of flint knives, and later on they made all sorts of tools out of stone, which helped them very much in their daily lives. But these things came later.

"My new people have learned a great deal, since I have been away," said Mother Nature to the Sun. "Now I am going to teach them to eat meat."

"How will you do that?" the Sun asked.

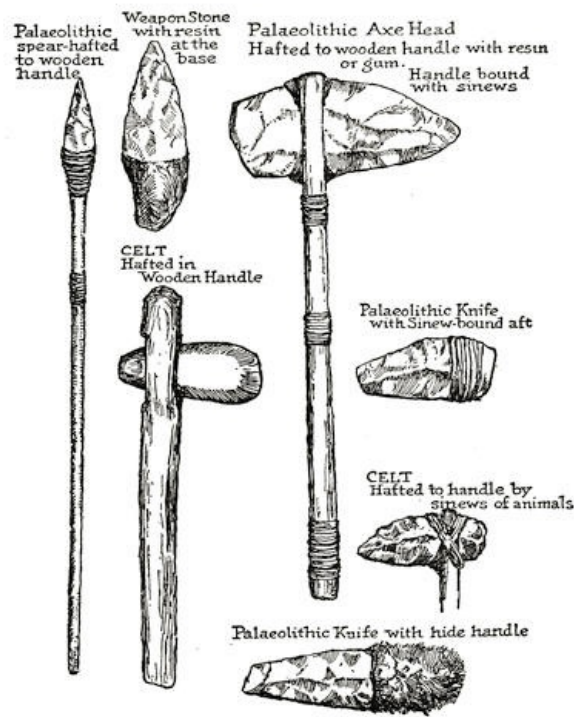
"By taking away their fish, so that when the Winter comes, they will be hungry."

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TYPES OF WEAPONS USED BY EARLY MAN

"How can you take away their fish?" said the Sun.

"By taking away their lake," replied Mother Nature, "and for that I shall need Wind and Rain."

So she called Wind and Rain to her.

"Wind and Rain," she said, "I want you to blow up a great storm, and turn the little stream in the valley into a mighty torrent, and when the torrent is strong enough, it will wash away the banks that dam up the lake at the lower end of the valley, and carry the lake, and all the fish in it, right down through the low country into the Ocean."

So Wind and Rain made a terrible storm, and the Lightning flashed, and the Thunder roared, and all the cave men crept into their holes in the rocks, afraid. For three days the storm swept through the valley, tearing down the trees, stripping them of their fruit, and turning the stream into a raging muddy torrent, that tore along in its course like a flood.

When the Sun at last shone again, and the cave men came out of their holes to see what had happened, their lake was gone, and in the foaming yellow torrent that poured through the valley there was not a single fish.

Of course there was some food remaining, fruit, and nuts, and eggs, but with so many to feed it did not last long, and as the cold rainy weather came on, the cave men, without any fish to eat, were soon very hungry. Once more Mother Nature was about to teach them something new by means of suffering and pain.

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CHAPTER VIII

MA-RA FINDS A NEW KIND OF FOOD, AND A COAT OF FUR

MA-RA, the grandson of Ra, was out looking for food. It was the chief thing the cave men did. When they had plenty, they would lie in the sun and sleep, but when food was scarce, as it was now, they spent the whole day, from morning to night, looking for something to eat.

Ma-Ra went down along the banks of the stream, hoping to find a fish. It was not so much of a torrent, now, as it had been during the storm, but it was still swift and strong, dashing down over the rocks in the narrow way it had cut for itself, and boiling up here and there in clouds of foam. The wide lake at the lower end of the valley was gone, and there were no longer any quiet marshy pools along the edge of the stream, in which fish might live.

The stream poured out of the valley through a narrow gorge, tumbling over the rocks in a foaming waterfall. This was the only entrance to the valley, except over the rough, forest-covered hills that surrounded it on all sides, and none of the cave men, in their hunts for food, had ever gone outside the valley. They knew nothing of the country beyond, and were afraid to enter it, not knowing what sort of enemies they might meet. [104]

Ma-Ra reached the waterfall and stood there for a long time, his heavy spear in his hand. All he could see through the gorge was a wide marshy plain, covered with tall rank grass, with here and there a clump of fern-like bushes and trees. He wondered if there were any food to be found in the plain, for he had had nothing to eat since the afternoon before, and he was very hungry. He knew it would be useless to go back to the caves, for he would find no food on the way, and when he got back, there would be nothing there either, except a few of the dry roots of plants on which the cave people were trying to keep themselves alive. Ma-Ra felt a spirit of adventure stirring within him; why, he said to himself, should he not go outside the valley and see what he could find? He might as well be killed by some wild beast, as starve to death. So he decided to go. [105]

Picking his way carefully over the slippery rocks beside the waterfall, he finally got to the bottom of it, and found himself on the edge of the wide, marshy plain. There were many hummocks of grass, with muddy pools between, but although he searched very carefully, in none of them could he find any fish.

As he walked along through the tall grass, higher than his waist, he saw many large birds fly over his head, lighting here and there to feed on the tender shoots of the grass, but while he knew these birds might be good to eat, there was no way in which he could catch one of them.

Suddenly Ma-Ra paused, the hair on his neck and head standing up straight. Some animal was coming toward him through the grass; he saw the grass tops waving, and heard low grunts, as the creature forced its way along through the mud. What it was Ma-Ra could not tell, but he stood quite still, a little to one side of the path the animal was taking, and waited, spear in hand.

In a few moments he saw a heavy pointed snout come poking through the grass, with little sharp tusks sticking upward, and small bright eyes, which turned quickly from side to side, watching for any danger. Suddenly the animal saw Ma-Ra and stopped. It had never seen a man before, and did not know what to make of him. [106]

Ma-Ra was very quick. Without waiting a moment, he drove his flint-pointed spear into the animal's side, just behind its fore-leg.

The wild pig tried his best to use his sharp tusks, but it was too late. Ma-Ra's thrust had been a fatal one, and in a few moments the boar fell over on his side, dead.

Ma-Ra drew out his spear. Some bits of the animal's flesh, warm and covered with blood, clung to his spear point. Half starving, he put them in his mouth, chewed them, swallowed them. They tasted good to him, even better, he thought, than raw fish. With the blade of his spear he cut some strips of flesh from the animal's side and made a hearty meal. Then, because the body of the boar was too

large and heavy for him to carry, he twisted some marsh grasses together, tied them to the animal's front legs, and began to drag it along through the marsh toward the entrance to the valley.

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When he at last came to the waterfall, he was tired, and he saw at once that he would not be able to carry the body of the boar over the steep, slippery rocks that led into the valley. So he sat down to think what he should do, and meanwhile, ate some more of the boar meat. Soon he heard a cry from the rocks above, and saw two of his brothers standing in the valley entrance, looking down at him in surprise.

He called to them to join him, which they did, chattering loudly over his bravery in going outside the valley. They too were very hungry, so Ma-Ra showed them the boar he had killed, and gave them some of the meat to eat. They liked it, as he had, and soon their stomachs too were full. Then the three of them carried the body of the boar up over the steep rocks beside the waterfall, and took it home to the caves, very proud of what they had done.

That night Ma-Ra's family had a big feast, and Ra patted his grandson on the back and said a word or two which meant, in their simple language, that he had done well. The next day several parties of the cave men went out to hunt for the new sort of food. They found many different kinds of animals, in the marsh, and on the hillsides around the valley, and they ate them, and soon got to like the flesh of animals better even than they had liked the raw fish.

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That winter the tribe did not go hungry, and the new food they had found, as well as the danger of hunting for it, made them bolder and fiercer than ever. There were scarcely any animals that they were afraid of now, except the great mammoth elephants, which we call mastodons, and the huge hairy rhinoceros, which sometimes attacked them in the marsh, and the terrible sabre-toothed tigers.

Food was not the only thing the cave people got from the bodies of the animals they killed. For one thing, they found a way to use the skins.

At first, finding them tough and not fit to eat, they threw them away, but Mother Nature did not like this. She wanted her children to learn to use the furry skins of the animals they killed. So, one day, when Ma-Ra and some of his friends were stripping the skin from an animal they had speared, in the marsh land, she called Cold and Rain to her and told them to make Ma-Ra and his companions just as uncomfortable as they could.

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Cold and Rain laughed when they heard this, for they loved to make the funny little creatures dance, so they poured down such a bitter cold rain that Ma-Ra and the others were chilled to the bone.

Ma-Ra, his teeth chattering from the cold, looked at the skin he had just stripped from a small bear. The skin was still warm, and without thinking he wrapped it about his head and shoulders to keep off the cold rain. His friends did not understand what he was about, at first, but soon they saw that Ma-Ra was warm, while they were not, and they tried to take the skin away from him, but he would not give it up.

When the rain was over, and the party had returned to the valley, Ma-Ra took the skin of the bear with him and hung it up on the wall of the cave.

The next day, when he went to get it, he was very much disappointed to find that it had dried hard and stiff as a board, and seemed no longer of any use to him.

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Now Ma-Ra had begun to think quite a good deal, and he remembered that when the skin was soft, the day before, it had been moist, so he took it down to the bank of the stream and washed it over and over in the water, scrubbing it with sand, and pounding it between two round stones, until it had become quite soft again. Then he put it in the sun to dry.

Again it dried stiff and hard, and Ma-Ra was about to throw it away. Then he remembered how the grease and fat of the animals he killed softened the rough hard skin of his hands, so he got a lump of grease and rubbed the bear skin over and over with it, working the grease into all the pores. This time, the skin stayed soft, and Ma-Ra, although he did not know it, was the first Man to make leather.

He threw the heavy piece of fur about his shoulders, and fastened it with a sharp thorn, and walked about very proud of his new fur cloak. After that, the cave people did not call him Ma-Ra any longer, but Han, which in their language meant the skin of an



THE BEAR SKIN

Ma-Ra threw the heavy piece of fur about his shoulders, and fastened it with a sharp thorn, and walked about very proud of his new fur cloak.

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Other very useful things, too, the cave people found in the bodies of the animals they killed. Some of the bones, after they had cracked them open and eaten the marrow, they used for knives, or for spear points, and the women made coarse needles from them, with which they later on sewed together pieces of skins for belts, to hold the men's clubs and knives when hunting. Sinews, drawn from the animals' muscles, gave them strong cords or thread, and after a time they made sandals, or moccasins, out of the tough hides, to protect their feet when running over the sharp stones. The teeth they often strung on bits of sinew and hung around their necks, to show what great hunters they were.

As the centuries went by, they once more found, in the marshes below the valley, fish which had made their way up from the Ocean, and from the bones of these they made smaller and sharper needles, for sewing the leather they had begun to use. Strips of this leather, called thongs, or the twisted entrails of animals, called gut, took the place of the cords made of marsh grasses, for binding on the heads of spears, or axes, and as the cave men took to wearing skins and furs, they began to lose the hair on their bodies, and they looked less and less like animals, and more and more like human beings.

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Besides getting their food by hunting, the cave people soon learned many ways of trapping animals and other game. In the case of the larger beasts they sometimes made traps by digging deep holes or pits in the ground and then fixing upright in the bottom of these pits many strong, sharp stakes, with keen points. Over the pits

they would lay a thin covering of branches and leaves. These traps were placed in the paths the animals usually took when going to the streams and ponds to get water. When the heavy beast walked on the thin covering of the pit, it would give way, and he would fall on the sharp stakes, and either be killed, or wounded so that the hunters could make short work of him with their spears.

Smaller animals and birds they trapped by snares of different sorts. One kind they made by bending down a stout sapling until it almost touched the ground, and hooking the end of it under a notched stake driven in the earth. On the end of the sapling was a noose of cord, or gut. This noose they spread in a circle around the notched stake. On the stake they tied a bit of food, for bait. When the animal tried to pull the food off the stake, the bent sapling would slip out of the notch and fly upward, and the animal or bird would be caught in the noose.

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In many such ways the cave men got food for themselves and their families.

The Sun was very much surprised to see how quickly the cave men had begun to learn.

"They are smarter than any of the other animals on Earth," he said.

"Yes," said Mother Nature. "They are smarter, because they have begun to use their brains, to think, just as I told you they would. But they have really only just started. If you watch them carefully, you will see many surprising things, in the next two or three thousand years."

"They seem very cold," said the Sun, "even with their caves, and their fur coats. I have a hard time to keep them warm, in the Winter."

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"I will attend to that," Mother Nature told him. "I am about to send them a very wonderful thing."

"What is it?" the Sun asked.

"Fire," Mother Nature replied. "Soon they will be making Heat work for them."

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CHAPTER IX

THE COMING OF FIRE

WHEN Mother Nature got ready to send Fire to the cave men, she called Heat and Cold and Wind and Rain to her and explained what she wanted them to do.

"My little people down there," she said, "need something to keep them warm, during the Winter, and also they need something to cook their food with, and later on to help them make pottery, and smelt metals, and do all the wonderful new things I am going to teach them to do. Without Fire, they can never be anything but savages, the way they are now. So we must send them Fire."

"Fire," said Cold, puffing out a great cloud of frost. "I have no Fire to give them."

"Nor I," said Wind and Rain.

"I have plenty of Fire, inside the Earth," said Heat. "Do you want me to burst out in a blazing volcano? I am afraid it might burn them all up."

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"No, Heat," said Mother Nature. "We do not need any volcanoes just now. But you have another way to give them Fire. Have you forgotten Lightning?"

"I see," said Heat. "Lightning is certainly very hot. What do you want me to do?"

"The trees and grass in the valley," Mother Nature replied, "are brown and dry from the Sun. Cold and Wind and Rain, I want you to send a thunder storm to the valley, and set the forest afire with a bolt of Lightning. Then, Heat, you can blaze away all you like, until I tell Rain to put you out again."

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THE FIRST FIRE

The storm rolled down over the valley, and at last a great flash of Lightning struck a dry tree and set it on fire.

So Heat, dancing down the rays of the Sun, turned the water at the surface of the Ocean into vapour, like steam, and it rose high in the air and formed clouds. Then Wind drove the clouds over the valley, and Cold blew on them, and turned the vapour of the clouds back to water again, so that it fell as Rain. Now each little bit of vapour in the clouds carried with it a tiny spark of Electricity, for the Air about the Earth is always filled with Electricity, carried by

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tiny drops of moisture. When all the little sparks got together in the thick black clouds, they formed big sparks, and when the clouds got so full of Electricity they couldn't hold any more, these big sparks jumped from the clouds down to the Earth, in great flashes, sometimes half a mile long. You can make a little spark like that, if you walk quickly over a soft rug, on a dry winter day, and then put your knuckle to the metal radiator. It will be a real Lightning flash, although it will be only half an inch long, and the little crackling sound you hear, as the spark jumps from your knuckle to the radiator, is real thunder, but because the flash is so small, your thunder will not be very loud.

So the storm rolled down over the valley, and the Lightning flashed, and the Thunder roared, and all the cave people ran into their holes and huddled together, shivering. They had seen the Lightning and heard the Thunder before, but because they did not know what they were, they thought some terrible dragon, with a roaring voice and a tongue of flame was coming to eat them up.

At last a great flash of Lightning struck a dry tree and set it on fire, and the Wind blew the clouds away for a while, so that the Rain might not put the fire out. [122]

"I'll show them something," said Heat, as the tree and the bushes about it began to crackle and blaze.

As soon as Wind blew the storm away, the cave people, not hearing the Thunder any more, came out to see what was going on. When they saw the blazing tree, they were at first very much frightened, for they had never seen Fire so close at hand before. So they chattered and pointed, afraid to go near it.

After a while, when they saw that the fire did them no harm, they went closer, and gathered about the roaring flames, watching them as they devoured the dry leaves and branches.

Then Mother Nature told Wind to blow the flames gently toward the cave people, and the heat from the flames warmed them, and they liked it. So they came nearer, and at last a boy picked up a blazing branch that fell near him, because it was red and pretty. But he dropped it again very quickly, you may be sure, and ran howling with pain to his mother, his burnt fingers in his mouth. [123]

"I am sorry," laughed Heat, dancing among the flames, "but I had to let you see that I can burn as well as warm you. So you had better treat me with care."

Soon the flames spread, and other trees took fire, and the flames roared and danced down the valley like mad, their red tongues licking up everything that came in their way.

Some of the older cave men went to the place where the fire had first started and gathered about the hot coals, enjoying the warmth. But soon they saw that the fire was dying out, so they began to throw leaves and twigs and branches on it, and every time it blazed up they shouted with joy.

When Mother Nature saw that the cave people liked the new thing she had sent them, she told Wind to blow the storm back again, so that Rain might fall on the blazing forest, and put out the flames before the trees were all burned up.

"But do not wet the little fire the cave people have kept burning among the rocks," she said, "for if you do, they will not be able to light it again. And I wish, Cold, that you would blow with all your might." [124]

The cave people, gathered about the fire, felt the cold wind on their backs, and because the fire kept them warm, they liked it, and put more and more wood on it to keep it alive. Whenever it died down, and they felt cold again, they brought more branches and twigs. After a time, night came, and the bright yellow flames pleased them so much that they danced about the fire, chattering with delight.

Presently they grew sleepy, and lay down beside the fire, because it was warmer there, than it was inside the caves. And they went to sleep and forgot all about the fire, so that, when morning came, they woke up, chilled by the cold, to find that their fire was gone.

This made them feel very sad. Then one of the younger men, who was called Ab, because he was slow and lazy, like a bear, was very angry because the fire had gone out and left him cold, so he began to poke about among the ashes with a stick, and after a while, away down at the bottom of the pile, he found a bed of glowing red coals. He got some leaves and twigs and put them on the coals, and when [125]

the fire blazed up again, the cave people all shout Ai-Ai, and that became in time their word for fire. They called Ab Ai-Ab after that, because he was the one who had brought back the fire.

Mother Nature, who was watching the cave people, was glad when she saw that they had saved the fire, for she was afraid she might have to make it all over again for them. But she was not satisfied.

"The Rain will soon put it out," she said to the Sun, "if they do not carry it into their caves. I must teach them a lesson. But first, they must find out more about what Fire can do for them, so you had better keep on shining for a while."

The cave people, when they saw that the fire was burning again, left Ai-Ab and the women to keep it blazing, while they went out to hunt for food. They did not know, then, all the wonderful things Fire was going to do for them, but they liked it because it kept them warm.

There were two boys in one of the parties that went down the valley. One was called Tul, which meant quick, and the other was called Ni-Va, which meant fish, and they called him that because he was a very good swimmer. Tul and Ni-Va were not allowed to go outside the valley with the older men, but were told to search through the woods for the sweet roots of certain kinds of plants that the cave men ate, and for eggs, and the young wild birds.

When Tul and Ni-Va came to the edge of the forest, they saw a great wide space which had been burned by the fire before the rain had put it out. So, being curious, they forgot all about the roots and eggs they had been sent after, and went poking about among the ashes and charred trunks of trees, to see what they could find.

They had been doing this for quite a while, when Ni-Va heard Tul call to him, and ran up to see what his companion had found.

There among some burnt bushes lay the body of a great bird, as large as a turkey. It had been sitting on its nest on the ground, and in trying to escape it had become entangled among some thick vines. The fire had burnt away the feathers of the bird, and left it scorched and black, and still a little warm from the bed of ashes in which it lay.

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THE FIRST COOK

Ai-Ab took a large piece of the deer meat, and putting it on the end of a stick, held it over the flames of the fire.

Tul tried to lift the bird by one of its legs, but to his surprise, the leg came right off in his hand, for the body of the bird had been cooked by the fierce heat.

Tul looked at the leg, smelt it, and then being hungry, began to eat. It was the first time that he or any other man had ever eaten cooked food, and the taste of it pleased him, so he told Ni-Va to eat the other leg. This Ni-Va did, and he too liked it very much, because it was much more tender than raw meat, and had a better taste. They took the body of the bird home and gave it to Ai-Ab, who was sitting beside the fire.

Ai-Ab, who was also hungry, smelt the cooked food, and when the boys showed him how they had eaten the legs, he tore off a great piece of the breast and devoured it. The rest he gave to some of the

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women.

Now Ai-Ab, although he was slow and lazy, was also very smart. When he tasted the cooked meat, and saw how good it was, an idea came to him. He did not say anything to the two boys about it, but when the men came home from hunting, bringing with them the bodies of two young deer, Ai-Ab took a large piece of the deer meat, and putting it on the end of a stick, held it over the flames of the fire.

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The other men crowded about, laughing, because they thought Ai-Ab had gone mad and was burning up his dinner. But when the smell of the cooking meat came to them, they liked it, and stopped laughing. Soon Ai-Ab drew the hot crisp meat from the flames and began to eat it, and then they all wanted to taste it, but Ai-Ab told them if they wanted any to cook it for themselves. Some of the others followed his example, holding the bits of meat over the fire on the points of their spears, and it was not long before the whole tribe took to cooking their food instead of eating it raw. They kept the fire burning day and night, and Ai-Ab watched it, and kept it going, and he was the very first cook among Men.

"They have found that Fire is very useful to them," said Mother Nature, "for it not only keeps them warm, but it cooks their food. I must teach them to take better care of it." So she told Rain to sprinkle the fire a little, but not to put it quite out.

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When the cave men saw that the rain was putting out their fire, they were very angry, for they did not want to lose it, but although they piled on more and more wood, the flames sank lower and lower, and at last the fire was nearly out.

Then Ai-Ab, who was the keeper of the fire, and had shown himself so smart, took a burning stick from the bottom of the pile, and ran with it into the cave where he and his people lived. It was a large cave, because Ai-Ab's father was one of the head men of the tribe, and had several wives and a great many children.

Ai-Ab took the burning stick into the cave and dropped it in the middle of the floor. Then he gathered some dry grass and leaves from the beds on which he and the others slept, and threw them on the coals. The fire blazed up at once, and his brothers and sisters ran out and got armfuls of twigs and branches, and although the twigs were wet, they finally began to burn.

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When the other cave men saw what Ai-Ab had done, they made fires in their caves, as well, and if one went out, they would borrow some hot coals from a neighbour. Once, however, during the rainy season, when all the wood was wet, they came very near losing their precious fire, so after that, the head man of the tribe told two old men, who were not strong enough to go out after food, to watch the fire and keep it going in a cave by themselves, which they filled with dry wood, and while one watched, the other slept, and in this way the fire never went out. The Fire seemed something sacred to them, and after a time, they got into a way of coming to the cave and saying prayers or making wishes to it, and thought of it as a sort of god. And in worshipping Fire, or the Sun, or any of the other great forces that helped them, the cave men, although they did not know it, were really worshipping God, who made all these things for their use.

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CHAPTER X

THE FIRST BOAT

TUL the Swift, and Ni-Va the Fish, were always together.

It made them angry not to be allowed to leave the valley with the hunting men, so they planned in secret to make a trip by themselves. The weather was warm, now, for the spring had come, and they talked a great deal about the country outside the valley, where they had never been, and planned to see it.

Tul had a fine spear he had made, with a long sharp lizard's tooth for a point. He had found the tooth among some bones in the lower end of the valley, where the lake had once been, and was very proud of it. Ni-Va's spear was tipped with bone, for spearing fish. He had never killed one yet, but he wanted to very much, for he heard the older men talking about it, when they came back from the great marsh. He also carried a small stone-bladed axe, while Tul took a flint knife, such as the men used for skinning animals. Both had leather sandals, and belts from which the hair had been scraped with sharp stones.

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They took no food with them when they went, and they did not tell any one that they were going, but one morning, very early, they crept out of the cave, before the sun was up, and made their way down the banks of the stream toward the lower end of the valley.

When they came to the waterfall, they climbed down over the path of rocks worn smooth by the feet of many hunting parties, and soon found themselves on the wide marshy plain which stretched out as far as their eyes could reach.

The river, after it emptied into the plain, spread out into many small winding streams, and that was what made the great marsh they saw before them. Off to the right, however, they found that the ground was higher, so instead of following the paths through the marsh which the hunting parties usually took, the two boys circled off toward the higher ground, as the walking was easier that way.

The ground was hard, and full of flat stones, between which the coarse grasses were springing up covering the Earth with a fresh coat of green.

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Tul and Ni-Va travelled all day, without seeing much to interest them. The path led downward hour after hour, toward the lower country, and they soon left the marsh far behind them. Great flocks of water fowl flew overhead, going to and fro from the marsh; they threw stones at them, but did not hit any. There were few trees or bushes on the hillside, and the ground was stony and rough, with scarcely any animals about. Once some strange creatures like deer, without any horns, ran near them, and in the distance they saw some giant forms that looked like the mammoths they had heard the hunters speak about, but nothing that they could use for food came within their reach.

When night fell they were both hungry, and cold, without any fire, and as they lay alone on the bare ground, trying to sleep, they felt a little afraid, for they knew that there were many animals in the country about the great marsh that would gladly eat them up.

Morning came at last, and found them not only hungry, but very thirsty as well. Far off, at the foot of the hillside, they saw what looked like a line of trees.

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It was after midday when they reached it, and found themselves on the banks of a wide river, flowing through a forest of tall bushes and trees.

It was much warmer here than it had been in the valley, for they had been travelling steadily downhill for nearly two days, and had reached the low country. There were many more living things about than there had been on the bare hillside, birds, and animals of various sorts that slipped noiselessly through the thick vines and bushes along the banks of the river.

The two boys threw themselves down at the edge of the stream and drank until their thirst was quenched. Then Ni-Va, with his bone-pointed spear, waded about along the shore and soon brought up a fine big fish. They ate it for breakfast, although they would have liked it better, if they had had a fire, in which to cook it, for they had come to like cooked food better than raw, now. After



THE FIRST VOYAGE

The two boys sprang upon the log which floated slowly out into the stream.



A DUG-OUT CANOE OF EARLY MAN

Made by hollowing out the trunk of an oak tree.

Ni-Va, the swimmer, wanted to swim across the river and see what the country was like on the other side, but Tul could not swim, and when they saw the dark backs of some great reptiles, like crocodiles, cutting the surface of the water, they soon gave up the idea.

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They were sitting on the bank, wondering whether they had not better go back, when Tul saw a log, the broken trunk of a tree, floating slowly down the stream, close to the shore. Climbing out on a low limb which hung over the water, he hooked the point of his spear into a broken branch on the log, and gently towed it up to the bank.

Ni-Va, when he saw what Tul had done, chattered with delight, and sprang upon the log. In a moment, Tul had joined him, pushing the log away from the shore with his spear. It floated slowly out into the stream, carried along by the current, and Tul and Ni-Va found themselves upon Man's first boat.

The two boys thought that they would be carried across the river on the log, but as soon as their clumsy craft drifted to the middle of the stream, the current caught it with full force, and began to sweep it at a great rate down the river. Tul, with his spear, tried to guide their boat by pushing against the bottom, but the water was far too deep for him to reach it and in his efforts he very nearly fell off the log. They knew nothing about paddling, even if they had had anything to paddle with, so they could only cling to the log and trust to some change in the current, to carry them to shore. To their dismay, however, they saw that the river was rapidly growing wider, and the banks getting further and further away.

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Hour after hour the log boat swept along in the swift current, and by the time the sun was ready to set, the river was so wide that they could hardly see the shore. There were no longer any thick woods, and all they could see were low sandy banks, with here and there clumps of bushes and tall grass. Suddenly the log, which had been drifting in a long curve around a point, came to a stop on a sand bar. Ni-Va slipped overboard, ready to swim, with Tul holding on to his shoulder, but to his surprise he found that the water came only up to his waist. Tul quickly joined him, and leaving their clumsy craft the two boys waded ashore.

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When they reached the sandy bank, and climbed up on it, a wonderful sight met their eyes. As far as they could see, before them and to either side, stretched a great shining body of water. They had never supposed there was so much water in the world, and

the sight of it for a moment frightened them. The vast sheet of water before them was the Ocean, and they were the very first Men in all the world to see it.

The bank on which they stood sloped down to a beach of shining white sand. The two boys crossed it eagerly, watching with wide eyes the great foaming breakers as they tumbled up on the shore. Tul, who was very thirsty, ran down to the edge of the water and scooping up a handful, tried to drink it. It was salt and bitter, however, and he quickly spat it out again.

Hungry and thirsty, the two adventurers sat on the sand and wondered what they could find to eat and drink. There might be fish, in this great wide water, but if there were, they soon saw that they could not get near enough to spear them, on account of the huge breakers. Presently Ni-Va, who had been idly digging in the wet sand with his fingers, brought up a round object that looked something like a nut. With the aid of two pebbles he cracked it open, and being very hungry, ate the soft meat he found inside. It tasted very good, and soon he and Tul had dug a large pile of the shell-fish, and made a hearty meal. The soft moist clams not only satisfied their hunger, but quenched their thirst a little, and as there was nothing else to eat, and the night was coming on, the two wanderers stretched themselves on the warm sand and soon fell asleep.

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The rising sun waked them, and springing up, they looked eagerly about. Near them, on the beach, they saw a huge turtle, lying in the sun. The boys had seen turtles before, since the hunting men sometimes brought them home from the marshes, but they were small compared to this great animal. Creeping up to it in some fear, Tul and his companion managed to turn it over on its back with their spears, after which they killed it and made their breakfast of some of the meat. There was enough to have lasted for a week, but the boys soon saw that they could not stay where they were much longer without water. They could not understand why the water in the Ocean was so bitter and salt, and they went back to the place where they had left the log, hoping that the river water might be different. They soon found that it, too, was salt and the little they drank of it only made them more thirsty than before. There was nothing to do but get back to the forest country as quickly as possible, where they might find some juicy berries or fruits to quench their thirst.

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Before they started Ni-Va tied some chunks of the turtle meat to his girdle with leather thongs, and Tul took a handful of the shells of the clams they had eaten and twisting some coarse grass about them, slung them around his neck. Then they went back to the log.

They thought, at first, that the current which had carried them down the stream would carry them back, but as soon as they had managed to push the log off the sand bar, it set out quickly for the sea, and they scrambled off it at once and waded back to the shore.

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The only thing to do was to go back along the river bank to the place from which they had started, so they set out. At first the way was easy, with smooth banks of sand to walk on, but after a time they came to the forest, and found it very hard indeed to make their way through the bushes and trailing vines. When night came, they were tired out, and afraid, too, because they heard the cries and grunts of many animals in the dense woods all about them. Without knowing why, the two boys did as their ancestors had done, and climbing into the forks of a great tree, spent the night safe from harm. In the morning they resumed their journey, and this time, when they tried the water of the river, they found that it was only a little salt, and they were able to drink it and quench their thirst.

When the middle of the afternoon arrived, they saw the hills from which they had come rising against the sky to their left, and leaving the banks of the river they set out toward the higher country.

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Several times they thought they had lost their way, but they kept on, and at last saw the surface of the great marsh stretching out before them. From here on, they had no trouble, and on the second night they reached the entrance to the valley. They were very tired, and hungry too, for the turtle meat they had brought along was all eaten up, but Ni-Va managed to spear some small fish along the edge of the marsh, so that their stomachs were not quite empty when they finally got home.

When they told their friends in the valley about the great water they had seen, stretching as far as their eyes could reach, the others would not believe them, and even the shells they had brought back

did not convince the cave people that there could be a stream or river as big as that. Tul and Ni-Va offered to guide a party to the Ocean and show them, but the others only laughed, and thought the boys were not telling the truth. They were quite satisfied, in the valley, they said, and did not care to go to a place where the water was not fit to drink, and there was no fire, and no caves in which to sleep. But Tul and Ni-Va made up their minds that some day they would go back to the great water, and see it again.

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The two boys were never tired of telling about their adventures, and were very proud of the necklaces they made of the shells Tul had brought back with him. They tried to make a log boat, like the one they had used to float down the great river, and because they could not find a log on the banks of the stream big enough to hold them, they got several smaller logs, and fastened them together with twisted ropes of grass, and in this way made a raft, and had great fun with it, riding down the swift-flowing stream that ran through the valley.

The Sun, who was watching them, laughed.

"Your little Men will never conquer the Ocean on a thing like that," he said, looking at the clumsy raft.

"Wait," said Mother Nature. "They will surprise you. That log, drifting in the river, was their first boat, and that raft, which is a little better, is their second. Some day, my children will take a log, and burn it out with fire, and make a canoe. And others will make strong frameworks of wood, or the bones of the whale, or twisted reeds, and cover these frameworks with the bark of trees, or skins, or pitch that they will find in the earth, and make canoes, and kyaks, and coracles. And later on, they will cover the frames of their boats with planks of wood, and put sails on them, and make ships that will carry them to the ends of the Earth. And they will even make ships of iron, and put great engines in them, and laugh at the storms of the Ocean, and conquer them, because they have brains with which to understand my laws."

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"It sounds like a fairy tale," said the Sun.

"It is," said Mother Nature. "The most wonderful fairy tale in the world, because it is true."

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CHAPTER XI

TOR-AD THE POTTER

TOR-AD lived many hundreds of years after Tul and Ni-Va made the first boat. He was not called Tor-Ad at first, but just Tor, which in the language of the cave people meant a Turtle. They called him this because he was very slow and lazy, and liked to lie half asleep in the sun while the other boys made spears, or practised throwing them at a mark, to make themselves more skilful in hunting.

Tor did not care for throwing spears. He preferred to sit among the rocks and dream. Sometimes he would sit still for hours, scratching little lines on the flat stones with a sharp piece of flint.

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THE FIRST ARTIST

Tor made large drawings on the walls of the caves that looked like bears, and mammoths, and wild boars.

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Long before that, some of the hunters, in making handles for their knives out of bone, or wood, had carved these handles into rude shapes, that looked something like an animal, or a man, but Tor had never seen any drawings, because none had been made. Sometimes he would find a flat piece of rock with weather marks, or cracks on it that reminded him of things he had seen—fish, or the heads of bears, or men. He would look at these for a long time, and try to copy them with his sharp bit of flint, but it was very hard for him to make anything that looked like the objects he saw about him.

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Still, Tor kept on trying, while the other boys laughed at him, because he would not go with them to swim, or hunt, or look for fish in the shallow pools at the head of the great marsh, but Tor did not mind, for he was happy scratching on his rocks in the sun.

One day, after many trials, he at last drew something on a flat stone that looked a little like a fish, and he ran to the cave with it and showed it to his father. Tor's father, instead of being pleased, was angry with him, and told him he had better go with the other boys and learn to spear fish, and not waste his time trying to make pictures of them. Tor's mother, however, liked the little drawing, and kept it in the cave.

As Tor grew older he learned to draw many things with his sharp piece of flint—figures of animals and birds, and some of them were so good that his friends could tell what they were, and got him to

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scratch others for them on bits of bone, or the handles of their knives. He made larger drawings, too, on the walls of the caves, that looked like bears, and mammoths, and wild boars.

After a time, he found a bed of smooth red and yellow clay along the river bank, and used it, and the juice of berries, to colour the figures he drew upon the cave walls. Some of these coloured drawings we find even to-day, on the walls of caves in France and other countries, and protected as they have been from the wind and rain, the colours of these early crude pictures are as bright and clear as when they were first made, fifty thousand years ago.

One day, while playing with some of the clay he had found along the river bank, Tor began to roll a lump of it between his fingers, pleased because it was so smooth and easy to shape. At first he made only round balls, rolling them under his hand on the top of a flat stone, but presently he found that he could press a hollow in the lumps of soft clay, making something that looked like the cup-shaped shells of the large nuts which the tribe used for carrying water. Very carefully Tor smoothed and patted his lump of clay until he had formed a little round bowl, thick and clumsy, but still large enough to hold several drinks of water. The thought that he had made something new pleased him, and he took it home with him and put it on a ledge of rock in the cave. Then he forgot all about it.

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When his mother found it, in the morning, it was quite hard and dry. She did not know what it was, at first, but Tor told her how he had made it from the river clay, and she was so pleased that she took it down to the stream with her, and showed it to some of the other women, who had come to fetch drinking water in bowls made of the shells of large nuts. But when Tor's mother came back to the cave with the clay bowl full of drinking water, it got soft and began to lose its shape, which made the other women laugh at her, and at Tor, for trying to make a drinking cup out of mud. Then Tor's mother became angry, and threw the bowl into the fire which she had made before the cave, to cook fish for breakfast. And Tor she sent away to the hills about the valley, to gather eggs from the nests of the wild fowl which lived there.

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Tor felt very badly at the loss of his little bowl, and when he got back to the caves that night, and his mother was busy with the eggs he had brought, he took a stick and began to poke about in the hot ashes of the fire, hoping to find the bowl again.

At last he discovered it, among the coals at the bottom of the fire, and dragged it out with the stick, for it was too hot to touch with his hand.

When it got cool, he took it up. A piece had been broken from one side of it, when his mother threw it down, but otherwise it was not much hurt. Tor was surprised to find, when he had brushed the ashes from it, that while before it had been yellow, it had now turned a bright red.

This pleased him, although he did not understand it, so he took the bowl down to the river-bank, and put it in the water, thinking to soften the clay by wetting it, as he had often done before, and then mould it over again into something else. To his surprise, the water would not soften the clay, but it did wash it clean, and made it seem redder and prettier than ever. Then he struck it against a stone, and at once it broke into many sharp pieces, just as a flower-pot would be shattered to bits, if you were to strike it against something hard.

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THE FIRST POTTER

He worked all night, heating in the fire the clay bowl he had made.

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All this puzzled Tor for a long time, but he decided at last that the heat of the fire had dried and burned his clay and changed it so that it became hard and red. He made up his mind to make another bowl for his mother, and this time to burn it in the fire first, before he gave it to her.

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Very early the next day he got another lump of clay, and made a larger bowl, taking great care this time to shape it carefully, so that it was round and smooth. Then he drew the picture of a turtle on one side, to mark it with his name, and a fish on the other, and hid it away among the rocks until he should have time to make a fire and burn it.

That night, when every one was asleep, he took some hot coals from the fire before the cave, and carrying these coals in the clay bowl, he made a new fire at a hiding place he knew of among the rocks. All night he sat beside the fire, watching it, heaping on fresh wood to keep it blazing hot. In the morning, very sleepy and tired, he took the bowl out of the fire with a crooked stick, cooled, washed and dried it, and filling it with water, carried it proudly to his mother.

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At first she would have nothing to do with it, because the first one had been such a failure, but after awhile, when she saw that the water did not soften it, and that it had such a pretty red colour, she was very much pleased, and called Tor's father and some of the others to come and look at it.

They did not see much use in it at first, since the nut shells they used for carrying water they thought quite good enough. They did, however, like the pretty red colour of the pottery, and Tor's mother was so proud of the bowl that she kept it in the cave, and would not let any one drink out of it but herself.

Soon Tor found that he could make much larger bowls and jars out of the smooth soft clay, and after a time, the cave people used these jars for storing nuts, or roots, or berries, when they had more than they needed at the moment. But still the thought had not occurred to them to store away food for use during the winter. Even in the coldest weather, they were able to kill animals, and fish, and they supposed they would always be able to do so.

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Tor also made queer little figures, out of the clay, and red beads, with holes through them, which the women strung on bits of leather, or sinew, and used for ornaments, about their necks. And because in their simple language, Ad was the word for earth, or clay, they began to call the clay worker Tor-Ad, instead of just Tor.

It took the cave dwellers many many hundreds of years to learn how to ornament the bowls and jars they made with pictures and patterns in colours, and a much longer time, to find out a way of making them smooth and round by whirling them about on a flat wheel and pressing their fingers, or a wooden tool, against them as they turned. We must remember that the minds of the first men grew very slowly, and it often took them a very long time to think out what seem to us very simple ideas indeed. Even now, although many thousands of years had passed, since the days of Adh, they knew nothing at all about metals; their weapons and tools were made of stone, but as time went on, they made them better and better, so that among the relics we find of the later stone age are axes, beautifully polished and strong and sharp enough to be used in working wood, knives, with keen edges, spear and arrow heads, scrapers, for scraping the hair from hides in making leather, and even such fine things as razors, all made of stone. Some of the tribes during the latter part of the stone age were wonderful workers in both wood and stone. With tools of the very hardest flint they cut softer stones into great building blocks, built palaces and temples, and monuments of all sorts, some of which are found even to-day, buried in the sand or earth, and well preserved in spite of their great age. Whenever men of science dig up the ruins of these ancient villages and towns, they find weapons of flint and bone, the ashes of fires, and many pieces of broken pottery, showing that the use of fire, the making of stone implements, and the burning of clay pottery, were the first three great steps taken by Man in his progress toward what we call civilisation.

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CHAPTER XII

HOW RA-NA SAVED HIS PEOPLE

RA-NA was a wise old man who had dwelt in the valley for nearly a hundred years. He was lame, having had his leg almost torn off by a bear while hunting in the marshes, but his wits were very keen.

He was one of the watchers of the Sacred Fire, and lived in the Fire Cave with another old man named Sut, who was almost blind.

There were great piles of firewood before the cave, and more was stored inside, to be used in wet weather. In the centre of the cave was a flat rock, with a deep hollow in the top of it, in which the fire burned. This fire was never allowed to go out. One or the other of the old men watched it day and night, throwing on a few pieces of wood whenever they were needed. When rain came and the fires the cave men had built outside were put out, it was easy to build them again by taking hot coals from the Sacred Fire.

Later on, the cave people learned a way to make fire by rubbing two sticks together, but it was a long time before they found out how to do this, and meanwhile, they had to keep their precious fire always burning, for fear they might lose it.

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Since the old men who watched the fire were never allowed to leave it, they could not go out to hunt for food for themselves, and so the cave people brought it in to them; bits of fish, and meat, and roots and grains and nuts. After a while these offerings they brought to the fire watchers came to be looked on as offerings to the Fire itself; the people were thankful to the Fire because it warmed them, when they were cold, and frightened away wild beasts, and cooked their food. So they began to think of the Fire as a sort of god, and showed their thanks to it by bringing in these offerings of food. In this way it soon came about that the supply of meat, and fish, and other things the people brought to the cave was much more than the two old men could possibly eat, so they hung the fish, and the strips of meat, on poles stretched across the roof of the cave, in order that it might not be wasted. The nuts, and grains, and sweet-tasting roots they piled up in great heaps in the back of the cave. Ra-Na and his companion did not know when they hung the strips of meat and fish in the roof of the cave that the smoke from the fire would preserve them. They only thought that they would dry. But we know now that if we hang fish, or meat, in the smoke of a burning fire, it will be preserved from decay, and will keep, without spoiling, for months and even years. There are certain chemicals, such as creosote, in the smoke from burning wood, which go into the meat or fish and keep it from decaying, and this way of preserving food has been used from the earliest times, and is still used to-day, just as it was thousands of years ago, to make smoked fish, and bacon and ham.

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The weather in the valley had been growing colder year after year, but so far there had been very little ice or snow. Mother Nature, who was now ready to teach her children another lesson, called Cold to her.

"Cold," she said, "you have certainly helped me a great deal. Now I have something more for you to do."

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"What?" Cold asked. "Do you want me to freeze your little people again? I love to make them shiver and shake."

"I want you to send them Ice and Snow. They might as well get used to such things, for they are going to see a great deal of them from now on."

So Cold flapped his wings, and blew a bitter blast from the frozen north, and all the little raindrops were turned to beautiful white flakes of snow, and all the marshes and streams and lakes were covered with ice many inches thick.

The north wind swept through the valley like a knife, and made the cave people shiver and shake to their very bones. They put on their fur coats, and huddled over fires in the caves, waiting for the cold to go away, as it always had before. But this time the cold did not go away, but got worse and worse, and the snow whirled down and covered all the valley, and the ice got thicker and thicker. The cave people had never seen anything like this before, and they were afraid. After a while, when they had eaten all the food they had in the caves, they began to get hungry, so hunting parties went out to

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find food. These parties searched everywhere through the valley, and the marsh-land outside, but they could find hardly anything. The ice on the marshes kept them from spearing fish; they broke holes in it here and there, but the fish would not come near the holes, and they could not reach them with their spears. The thick snow which covered the ground prevented them from finding any of the sweet roots they often ate when other food was scarce, and there were scarcely any animals about that they could kill. The few that they saw easily got away, for the cave people could not run through the thick snow fast enough to catch up with them. Party after party came back to the caves with little or nothing at all; a few wild fowl that they had managed to knock down with stones, and some small animals that they found frozen in the snow. There was not enough food to go around, only a mouthful apiece, and as the days went by, and the cold got worse, the cave people once more found themselves starving.

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THE SACRED FIRE

Many of them went to the cave of the Sacred Fire, and prayed to it, for they thought the fire was a god which could drive away the cold.

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Many of them went to the cave of the Sacred Fire, and prayed to it, for they thought the fire was a god, the spirit of warmth and heat, which could drive away the cold. But they brought no offerings of food to place before the fire, because they had none to bring. Even to the fire watchers they could bring nothing.

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This, however, made no difference to Ra-Na and his companion, because the fire cave was full of food, and they had plenty to eat.

Ra-Na got to thinking about how hungry the people were, and of all the good food in the cave, so when any came to worship the Sacred Fire, he gave them something to eat. Soon all through the valley the people were saying that the Fire God was taking care of his children by giving them food, and they came, and were fed with the smoked meats, and fish, and the roots and nuts which the two old men had stored away.

It did not take very long to eat all this food up, for there were many people in the valley, but by the time it was all gone, the storm had passed, and under the heat of the sun the snow and ice began to melt, so that the hunting parties were once more able to find fish and animals for food. They had a hard time, and many starved to death, but the tribe was saved.

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Ra-Na explained to the people how the Sacred Fire had kept the meat and fish for them, and they thought it a very wonderful thing,

a miracle. After that, when food was once more plentiful, they brought great offerings of it to the Fire Cave, to show how grateful they were for their escape from starvation, and they laid away stores in their own caves too, all through the summer, for they had learned a great lesson, the need of storing food for use during the winter. From that time on the cave people were never in danger of starving in the cold months, and for this they gave thanks to the Fire God, and to Ra-Na and Sut, who came to be looked upon as the Sacred Fire's priests.

When the first men began to worship Fire, they were giving thanks to one of God's great forces, which had brought them comfort and happiness in the shape of warmth and cooked food and safety from their enemies, the wild beasts, who feared the hot flames. This worship of God's great natural forces was the beginning of religion. Later on, they came to worship the Sun, the Rain, the Wind, the Sea, the Lightning, the Rivers and Mountains, seeing in each the power of the Great Spirit which had created them all. This early kind of worship was in many ways very beautiful, but it was not long before the priests of the Fire or other god began to change it to suit themselves. Having nothing to do but live in the cave or temple, and be fed by the tribe, they found life very easy and comfortable, and this made them think themselves better than the common people. So they became proud and arrogant, and made every one believe they could get special favours from the gods. In this way they came to rule the people, for they would threaten any one who did not obey them with the anger of the gods. It was very easy for these priests, they had great power, and instead of being two old men who watched the fire, younger men became priests, with many followers about them, all of whom the people had to feed and support in idle luxury. Soon the priests began to make all sorts of rules, telling the people what they should eat, and wear, ordering them to build fine temples, in which the priests might live, forbidding them this and that, and claiming to have wonderful powers given to them by the gods. They became very cruel, too, and not only frightened the people by clever tricks, which to these simple creatures seemed like wonderful miracles, but told them to make all sorts of sacrifices to the gods, sometimes even human beings, men, women and children, who, they said, had to be killed and offered upon altars so that the gods would not be angry. All this work by the priests soon changed the simple religion of the people, worshipping God through His great forces into a brutal kind of religion which we call Paganism. This rule by the priests lasted for a very long time; it was found among all the ancient peoples, in Nineveh and Babylon, in Egypt, Greece and Rome, and it was only when Christ came to teach people a better way to worship the Divine Creator that people began to understand that God is not cruel and angry, asking sacrifices, but a God of Love.

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CHAPTER XIII

THE FIRST BOW AND ARROW

AMONG a people whose whole life was spent in fighting, and in killing animals for food, weapons were the most important things. We have seen how the cave men used clubs and spears, and later stone axes and knives. But as the tribe increased in numbers, so that the whole valley was filled with them, it became harder and harder to get enough food.

The cave men were very swift runners, and often pursued and overtook the smaller beasts, but there were many that they could not overtake. There were also great flocks of waterfowl that flew over the marshes. The hunters tried in every way to kill these, but it was hard work. Sometimes they would manage to hit one with a well-aimed pebble or stone, but even though they became skilful throwers, it was not easy to throw a stone far enough, or with enough force, to kill an animal or a large bird. So they all tried to think of some way to kill birds and animals at a distance.

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One of the first things they did was to invent the sling. Some early hunter found out, that by placing a smooth round pebble in a leather thong, and whirling it about his head, he could throw the pebble much further and harder than he could by hand. It was not long before the cave men became very skilful in the use of the sling. They found out just the right moment to let go one end of the thong, so that the pebble would fly straight and hard toward the mark, and soon they were able to hit and kill the marsh birds, something like our ducks, or geese, without much trouble. But the sling, although useful against such small game, did very little harm to animals of larger size. A wolf or a bear paid no attention to the pebbles that hit him, and either ran away, or turned against the hunters and attacked them.

Of course the cave men soon learned how to throw their spears, hurling them at the enemy with great force and skill. But they could not throw them very far, because they were so heavy, so they made smaller, lighter ones called javelins, which they could fling a great distance. The further they threw them, however, the less certain was their aim, so they often missed.

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On this account the early people tried in many ways to find out how to throw their sharp-pointed javelins a long distance, and at the same time with correct aim. One way was to use a throwing stick—a short piece of wood with a handle to it, and a groove along the top in which they laid the javelin or spear. With these throwing sticks they could hurl a spear a greater distance, than they could in the ordinary way. Some of these early peoples may have used the blow-gun, such as is used to-day by the savages of the forests in South America. These blow-guns are made of long, hollow tubes of wood, such as bamboo, and little poisoned darts are shot from them with great force by blowing through one end of the tube, just as boys to-day blow beans or bits of putty from a bean shooter. But it was not until man invented the bow and arrow that he found a really serviceable weapon for killing things at a distance.

Just how the bow and arrow came to be invented we shall of course never know. Some people think it came from the use of bent saplings in making snares or traps. Such a sapling, springing back when released, would throw a small object a considerable distance. Some think the bow may have developed from the bow-drill. One of the first ways of making fire, as we have said, was by rubbing two sticks together. A simple way to do this was to twirl one stick between the palms of the hands, like a drill, while pressing it against a piece of softer wood. Later on, men found that by twisting a double cord between the ends of a bent stick, they could twirl the drill by moving the bent stick from side to side, and they used these bow-drills, as they are called, not only to make fire, but to drill holes in bone, or bits of wood, or even stone. But it is very likely that man discovered the bow for shooting with first, and later used the idea of the bent stick to make the bow-drill.

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BOWS AND ARROWS AND SLINGS

With the bow and arrow, early man could kill his enemies at a distance.

Sometimes, when making and seasoning the long handles of their spears, the early men may have found that, if a spear shaft was crooked, it could be straightened by bending it like a bow in the opposite direction and tying the two ends together with a cord. This would have made a sort of bow, and it may be that in some such way as this man found that a string tied between the two ends of a bent piece of wood could be used to shoot a javelin or arrow a greater distance than it could be thrown by hand.

But however the invention of the bow and arrow came about, it was one of the most important steps taken by early man. He was now able to kill his enemies, his game, at a distance. As he learned to use his new weapon, he slowly found out the best kinds of wood to make it from, picking out those which were tough, strong and elastic. Not being able to cut down large trees and saw them into strips, he was forced to make use of small saplings, cut in the forests. He soon found out that these saplings, when green, were not hard and elastic; he had learned this in making his spear shafts. But when such saplings had been dried for many days before the fire, they became fit to use. Then he would scrape off the bark with a stone knife, make notches at each end, to hold the bow-string in place, and cut down the thicker end of the sapling until both ends of his bow were of the same size. For his arrows he used thin strong reeds at first, but later on made them of seasoned saplings too, using a smaller size. He knew, from making spears and javelins, how to fix at the end of the arrow a stone point, or a head of sharp bone, but he found out very soon that the arrows would not fly straight unless they had a bit of feather, or a tuft of grass fastened to their ends. It may be that these feathers were first fastened to the ends of the arrows as ornaments, just as they had been fastened to the shafts of spears, but when the cave men found that they would make their arrows fly straighter, they used them for that purpose.

The bow and arrow made it much easier for the cave dwellers to get food, and in those days, the getting of food was the chief object of their lives. Always there stood before them the fear of hunger. They had not felt this fear, when the days were all pleasant and warm, and there was plenty of fruit and nuts and game, but when the cold came, and food was scarce, the hunter who could bring back the most food became a very important man in his tribe. So the cave men tried very hard to become skilful in the use of their new weapon. With fire to keep them warm, caves to keep out the cold and rain, and the bow and arrow to help them get food, they became stronger and more fearless all the time. But the tribe in the valley had grown so large that there was no longer food enough for all near at hand, and soon parties in search of game began to wander farther and farther away from the valley, building huts of brush in the forests beyond the hills, or digging caves in the earth to protect them from the storms.

Mother Nature, who was watching the doings of her children very carefully, saw that the valley was getting too full, and began to make plans to find a new home for some of her people.

"How will you do it?" asked the Sun, to whom she had spoken of her plan.

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"Watch carefully," Mother Nature replied, "and you will see."

CHAPTER XIV

KA-MA THE TRAVELLER

KA-MA was a young man who was very restless and unhappy in the valley. Ever since a child he had heard the story of Tul and Ni-Va, and how they went out from the valley and found the sea, which the valley people called the Great Water. Tul and Ni-Va had been dead for a very long time, but still the old men, who had heard the tale from their grandfathers, told it about the fires at night, until the story became a legend, and Tul and Ni-Va were spoken of as children of the gods.

None of the valley people had ever tried to find the Great Water again; they were happy and contented where they were, and had no wish to travel so far from their fires, their caves. But Ka-Ma, who listened to the story with eager eyes, vowed that some day, when he grew to be a man, he too would brave the unknown dangers of which the old men spoke, and make his way to the river, and from there to the ocean.

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He forgot this plan, when he grew older, but sometimes at night it would come to him again, and make him restless and sad. But still he did not go.

There was a young girl in the valley called Tula, and she and Ka-Ma had played together when they were children. They liked each other very much, and when they grew older, they fell in love with each other, and wanted to marry.

In those days, when a young man saw a girl he liked, he would go to the rocks in the hillside and prepare himself a cave. Then he would hunt for her through the valley until he found her, and when she saw him coming, she would run, trying to escape him, yet hoping in her heart, if she liked him, that he would be swift enough to catch her.

Then, if the young man did catch her, he would take her in his arms and carry her to the cave he had made ready, and it would be their home from that time on.

Now Tula was swift, and strong, with long yellow hair, and smooth white teeth, and as she grew up, Ka-Ma said to himself that he would take Tula for his wife.

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But Tor, who was the strongest man in the tribe, and was called its chief, also liked Tula, and wanted her for himself. He had many other wives, but none of them was as young and swift and strong as Tula. So one day, Tor, seeing Tula bathing in the river, waited for her in the rushes beside the bank. When she came out, he struck her lightly over the head with his stone axe, and then took her in his arms and began to carry her to his cave.

Ka-Ma, who had also been waiting for Tula, saw this and it made him very angry. At first he crept along after Tor, afraid to do anything, because Tor was the chief of the tribe, but soon his anger and courage rose, at the sight of Tula in Tor's arms, and he ran up, axe in hand, and demanded that Tor let her go.

The chief roared at him, and beating his breast with his fist, told Ka-Ma to go away, but Ka-Ma stood his ground, for he saw that Tula who had now recovered her senses, was smiling at him. Then Tor dropped the woman, and drawing the axe from his girdle, came at Ka-Ma to kill him.

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The chief was very strong, but Ka-Ma was younger and more active and quick. For a long time the two fought, so that they were wounded on the shoulders, and arms and chest, and the blood ran down their bodies to the ground. Then Tula, who wanted Ka-Ma to win, picked up a stone and threw it at Tor, and struck him on the side of the head, so that for a moment he was stunned. With a great shout Ka-Ma raised his axe, and springing forward, brought it down with all his might upon Tor's skull. The heavy, sharp axe broke through the bone, and into Tor's brain, and he fell to the ground dead.

Ka-Ma was frightened by what he had done, for he knew that Tor had many friends, who would seek to kill him. So he hid the body beneath some leaves, and telling Tula to wait for him, he went back to his cave, and got his spear, and his bow and arrows, and tied what food he had in a piece of skin and hung it over his shoulders.

Then he returned to the place where he had left Tula, and together they fled from the valley.

Ka-Ma, remembering what he had heard about the journey of Tul and Ni-Va to the Great Water, made up his mind that he and Tula would go there too. The story told by the men said that the path lay along the edge of the great marsh, to a river, many times bigger than the one in the valley, and that here the travellers had been sent a log boat by the gods. Ka-Ma made his way along the marsh, with Tula following him, carrying the bundle of food.

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It took them three days to reach the wide river, because twice they lost their way, but at last they found themselves on its banks. There was no log boat in sight, however, and Ka-Ma made up his mind to build a raft. He hunted through the woods until he found eight or ten smaller logs, and these he tied together with thin strong vines, like grapevines, which he tore from the trees. Then he and Tula got on the raft and began to drift down the river.

Suddenly a shower of stones and arrows began to fall about them, and looking toward the shore, they saw a number of the valley people, friends of Tor, who had followed them to the river. Ka-Ma snatched up his bow to return the fire, while Tula, whose mind was very quick, began to paddle the raft toward the opposite shore with Ka-Ma's broad-bladed spear. It was slow work, and meanwhile the stones and arrows kept on falling about them, but moving along in the river current, they were a hard mark to hit. So while a few of the arrows and stones struck the raft, they did no harm. Tula kept on paddling and the raft slowly began to drift in toward the farther shore, and finally grounded in the mud. Snatching up their weapons and food the two voyagers quickly waded to the bank and hid behind a clump of trees.

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Their pursuers, however, did not give up the chase. Soon they began to bring logs from the forest, and Ka-Ma saw that they, too, were building a raft. There were five of them in all and they worked very quickly. In a little while a second raft started across the river, on which were four of the men. The fifth stayed on the other bank. The four who stood on the raft paddled very hard with their spears, as they had seen Tula do, and soon the clumsy craft was in the middle of the stream. Then Ka-Ma took his bow, and fitted an arrow to it. Very carefully he took aim, and fired. One of the paddlers on the raft fell, with an arrow through his shoulder. The others, however, came on.

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Again Ka-Ma fired, this time at closer range, and again his arrow found a mark in one of the men. Then, as the raft drifted toward the shore, Tula began hurling stones at it.

Unable to shoot their arrows with careful aim while on the shaky raft, the two who were unhurt began to retreat, paddling furiously in their haste to get back out of range. One of the men, who had been killed by an arrow from Ka-Ma's bow, they pushed from the raft into the river. In a moment the snouts of huge crocodile-like creatures appeared from the water, and the body of the dead man was torn to pieces.

The taste of blood made the crocodiles furious; they pushed their great bodies against the frail raft, driving it this way and that, and soon the vines which bound the logs together broke, and the two passengers found themselves struggling in the water. Their struggles did not last long; the hungry crocodiles rushed at them, and quickly ate them up.

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The fifth man, who had stayed on the shore, set up cries of fear and rage, and ran away. Ka-Ma and Tula, on the other side, watched him go, glad of their narrow escape. They did not try to continue their journey that day, but made a camp on the river bank. They had no fire, to keep away wild beasts, so Ka-Ma watched all night, spear in hand, while Tula slept.

In the morning, after eating the last of the smoked meat they had brought with them, Ka-Ma added some new logs to his raft, and bound it with stronger vines, so that there would be no danger of its coming apart, in case the crocodiles attacked them.

When they pushed off from the shore in the morning, they found the current much stronger than it had been the afternoon before; there was a tide running toward the ocean, but Ka-Ma and his wife, who did not know what a tide was, were thankful that their raft moved so swiftly. There were no crocodiles to be seen.

All day long they drifted toward the sea. The forests on each side of the river became thinner and thinner, and by the time the sun

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was sinking below the trees, the raft had come to the mouth of the river, and the voyagers saw before them the wide curving surface of the ocean.

The sight of the Great Water terrified them, they were drifting right toward it, and their raft, unlike the log of Tul and Ni-Va, did not ground on a sand bar, but kept right in the middle of the rapid current. They were very hungry, for they had had nothing to eat since morning, and their tongues were dry and swollen from thirst. The legend told by the old men in the valley had said that the river water as it neared the ocean was salt and bitter, not fit to drink. They had tried to drink it, as the day wore on, but could not, and the salt made them more thirsty than ever.

These troubles, however, they soon forgot in the terrible fear that they would be washed out to sea. Being land people, they were afraid of the great, wide ocean; they wanted to feel the earth, solid and firm, under their feet. And each moment they saw themselves being carried farther away from it. The mouth of the river was now so wide, that in the twilight they could scarcely see the low, sandy shores. [191]

Both Ka-Ma and his wife knew how to swim; they had learned this, in the river which flowed through the valley at home. With his spear in hand, while Tula carried the bow and arrows, Ka-Ma sprang into the water, and Tula followed him. Afraid as they were of the crocodiles, they were more afraid of the sea, so they struck out for the shore with all their might.

When they were almost tired out, they felt the sandy bottom under their feet, and a few moments later they had waded to the bank, where they lay for a time in the warm sand, resting.

Hunger and thirst drove them to their feet, for they knew they must find food and water before the darkness came. Ka-Ma remembered that the tale of the old men spoke of strange food, in shells like nuts, which Tul and Ni-Va had dug from the sand. With the point of his spear he also began to dig, and soon a pile of shell-fish lay before him. When they broke the shells open, they found soft, jelly-like creatures inside, which tasted very good and were moist enough to take away a little of their thirst. At last, when night came, they threw themselves on the sand tired out, and without keeping watch, slept until the dawn. [192]

In the morning, Ka-Ma's first thought was to find water. Even the shell-fish they ate for breakfast did not satisfy their burning thirst. They went up to the higher ground of the shore, but the sand was hot and dry, with no sign of a stream anywhere. Only a few low bushes and trees grew about, and they tried to relieve their thirst by chewing the tender green leaves.

Mother Nature, who saw the danger they were in, called Wind and Rain to her and told them to make a storm. When noon came, the waves of the ocean were dashing against the shore with a roar like thunder, and the rain poured down in torrents. Ka-Ma and Tula lay on the ground, with their mouths open, but the few drops which fell upon their tongues was not enough to satisfy them.

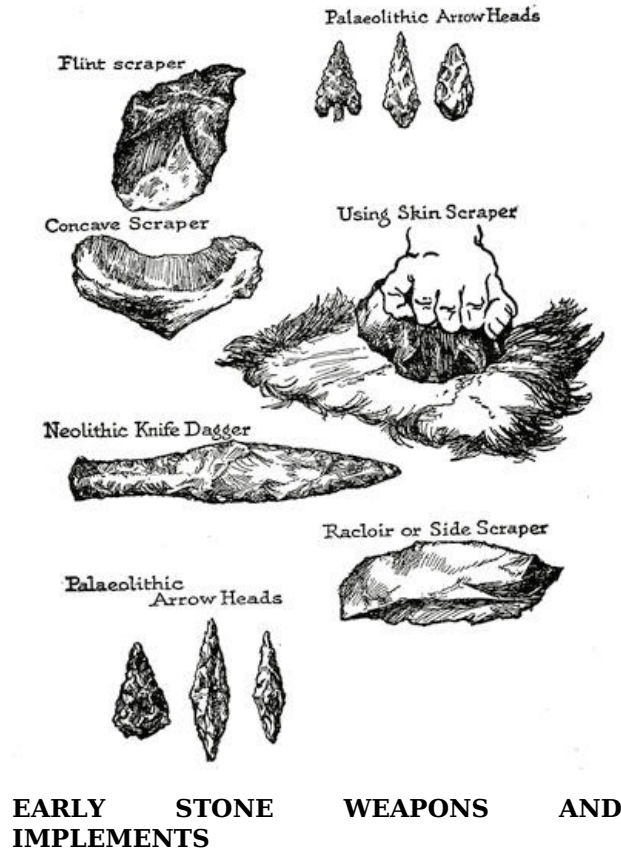
When the storm was over, however, and the sun came out again, they found many pools in hollow places in the rocks, and from these they drank their fill. Then, feeling stronger, they went back farther and farther from the ocean, until they found a clump of trees, with coarse grass growing about, and a spring of fresh water forming a little pool. The place where these trees grew was on a fairly high hill, overlooking the ocean, and here Ka-Ma decided to make their home. He knew, of course, that they could never again go back to the valley. [193]

He had always been used to living in a cave in the rocks, until now, but here there were no rocks, except those which jutted out along the seashore. So he built a strong hut of saplings and rushes. First he cut with his stone axe two posts, higher than his head, and as thick around as his arm. At the top of each of these posts was a fork, where the sapling had branched into limbs. He dug two deep holes in the ground with his spear, and set the two posts in them, pounding down the earth about them until it was firm and hard. Then he cut a third pole, and laid it across the top of the other two, its ends resting in the two forks. Tula, using rope made of plaited marsh grass, bound the cross-pole firmly to the posts. [194]

When this was done, Ka-Ma cut many more long slender saplings, and placing one end of each on the ground, rested the other end against the cross or ridge pole, to which Tula tied them fast. These

long slanting poles on each side, from the ridge pole to the ground, made a sort of tent. Then they gathered great bundles of the long tough rushes which grew in the salt marsh along the river bank, and wove these in and out of the slanting poles, until they had made a sort of ragged frame like coarse basket work. On top of this they laid more rushes, running the same way as the poles, that is, from the ridge pole to the ground, until the roof was many inches thick. Over these they tied more poles, to hold the rushes in place. One end of the little hut they blocked up with earth and brush; the other they left open, for a door, so that they could crawl inside and keep dry when it rained. Ka-Ma was very proud of his hut; he had built smaller ones like it, with his companions from the valley, when hunting trips kept them away from the caves for several days, but he knew this one was to be his home, so he took great pains to make it large and strong.

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It took them several days to build the hut, and meanwhile, Ka-Ma had speared fish along the river bank, and shot some wild birds with his bow and arrow, so that Tula and himself might have food. Having been used to eating their food smoked, or cooked, they did not like the raw birds and fish so much, but they had no fire, and knew of no way to get any. So they made the best of what they had.

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Here Ka-Ma and his wife Tula lived for many years, and their children grew up, and built other huts in the little grove, and thus was formed the first tribe of men to live by the sea. Because the way they lived was different from the way in which their forefathers had lived in the valley, they too became different. They ate more fish, and less meat, and because they killed but few animals, they did not use skins for clothing, but as we shall see later, began to weave a coarse grass-cloth out of the rushes they found in the marsh. They became great swimmers, built rough canoes out of wicker, covered with skins, and because it was not easy to spear fish in the deep waters of the river, the way it had been in the great marsh, they one day invented the fishhook. All these things, however, we shall tell about in another chapter.

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CHAPTER XV

THE SEA PEOPLE

As Ka-Ma's children grew up, he taught them all the things he knew, how to make weapons and tools of stone, how to dry and season wood, for spear handles, and bows and arrows, how to make cord of fish guts, or the twisted stems of marsh grasses, how to spear fish, use the sling, and shoot with the bow. But he could not teach them how to make pottery, for he could find no clay, and worst of all, there was no fire with which to burn it, even if he had found the clay.

The young people, who had never seen fire, and did not know what it was, were quite content to eat their food raw, for they had never tasted it any other way, but Ka-Ma thought every day of the Sacred Fire, and wished that in some way he could get it again.

Sometimes, when he was drilling a hole in a bit of shell, or in a stick of wood, with a sharp-pointed piece of flint, it seemed to him that the drill grew very hot, but no fire came. [200]

One day Ka-Ma took the dried shell of a nut which he had found in the forest, and after cutting off one end, began to drill a hole in each side of it. Through these holes he meant to run a cord. Not having any bowls or jars of pottery in which to carry water, he thought he could make a sort of water bottle out of the large nut. Then, when he went hunting, or fishing, he could carry the bottle about his shoulders by means of the cord, and so have fresh water to drink during the long, hot day. He had never done this in the valley, because there was plenty of water all about, sweet and fresh, but here all the water was salt, except in the little pool near his hut, and so he either had to carry some with him or go thirsty.

He used a thin sharp piece of flint with a wooden handle to bore the hole, twirling it rapidly between the palms of his hands, and at the same time pressing down upon it as hard as he could. It was a very hot day. The soft, moss-like fibres which covered the outside of the nut were dry as tinder. As the drill cut slowly into the hard shell, Ka-Ma saw, to his surprise, a tiny wisp of smoke curl up from the hole. Its smell told him it was the same smoke he had smelt so often in the Fire Cave at home. Harder and harder he pressed the drill down, faster and faster he twirled it, and then, suddenly, the smoke burst into a tiny flame, which licked up the dry fibres about the edge of the hole and was gone. [201]

Filled with wonder, he tried again and again, and each time the little flame appeared, and went out. At last, after he had thought for a long while, he picked a bunch of the dry moss-like fibres from the shell, and giving it to one of his sons, told him to hold the fibres in the flame the next time it appeared. He also gathered beside him a heap of dry leaves and grass.

When the boy put the fibres into the flame, they blazed up at once, and burnt his hand so that he dropped them with a cry of pain, but Ka-Ma took the blazing bit and placed it among the dry leaves and grass, and in a moment he had a fire. Tula, who had been watching him, quickly brought reeds, and bits of wood, and soon a hot fire was roaring in front of the hut. The children gathered about, astonished and a little afraid, but Ka-Ma and his wife were filled with joy. He did not know why the fire had come, for he did not understand that friction, caused by rubbing two objects together, makes heat, but he was very grateful, for he had now found a way to make fire whenever he wanted it. For this reason, it was not necessary for him or his family to keep the fire going night and day, and thus the new tribe no longer thought of the fire as sacred. They did not worship it, the way the valley people did. Being able to make it whenever they wanted to, it no longer seemed to them so wonderful, nor were they afraid of losing it. Instead of worshipping fire, they began to worship the Sun, and the Sea. [202]

That night, Ka-Ma cooked some fish over the hot coals, and he and all his family had a feast. Later on he showed his children how to preserve fish by smoking them, the way his people had done in the valley. Then he began to search through the back country for clay.

At last he found some, and it was not long before the new tribe was using pottery bowls and jars, just as they were used by the tribe [203]

in the valley.

One of Ka-Ma's sons, named Ran, was a great fisherman. No one could spear fish so well as he. In the ocean, of course, he could not reach them, for the water was far too deep, and the surf too strong, but he waded in the shallow spots along the river banks, and when he saw a fish lying in the mud, he would bring his spear down as quick as a flash, and rarely ever missed.

It was not long, however, before the fish became frightened, and when they saw anything moving about in the water they would swim away. This made it harder and harder to get them, and Ran sometimes spent a whole day, without bringing home more than one or two.

One day, while resting on the river bank, he saw a large fish snap up a little one and devour it. Ran thought that this might be a good way to bring the fish within reach of his spear, so he managed to catch several of the little fish by driving them into a shallow pool. Then he took the cord from his bow, and after tying one of the little fish to the end of it with a bit of grass, he lowered it into the water. Quick as a flash a large fish darted up, snapped away the little one, and was gone before Ran could raise his spear. [204]

When Ran saw that the strings of grass would not hold the little fish tight enough to his bow-cord, he tried to think of some better way to fasten them. One of his arrows had a head made of a sharp-pointed piece of bone about as long as his finger. Taking this piece of bone from the arrow, he sharpened the other end of it also, by rubbing it on a rough stone. Then he tied the bow-cord tightly about the middle of the piece of bone, and stuck the two sharp ends both ways into the body of one of the little fish. The large fish, he knew, would be unable to bite through the piece of bone, and while trying to tear the small fish loose, Ran believed he would have time to spear him. Once more he lowered the bow-cord into the water.

Soon a big fish darted up, but instead of trying to tear the smaller one loose, he swallowed it whole, and started away. Ran had no time to use his spear, but neither was the big fish able to get away, for as soon as he jerked against the strong bow-cord, the piece of bone turned crosswise and its sharp points stuck firmly in his throat. Ran, not expecting this, was almost pulled off his feet, but he could not let go of the bow-cord because the loop at the end of it was about his wrist. In a moment he had recovered his balance and hauled the big fish ashore. [205]

Although he did not know it at the time, Ran had made a great discovery. His hook and line were very poor and clumsy, but he had caught a fish with bait, and this was something no man had ever done before. He tried again and again, and while he was not always successful, and often pulled the little fish right out of the big one's throat because the piece of bone did not turn and stick fast, he still had caught seven or eight by the time the day was over.

Ran's clumsy tackle was only a beginning. Later on, the sea people made fish-hooks in many ways. One was to tie a sharp thorn, at an angle, to the end of a bit of stick, fastening it firmly with wrappings of sinew, or gut. Another was to make the same sort of a hook out of bone. Still another was to carve a hook from stone, with a barb on it, like the barbs they made on their stone arrow heads, so that the hook would not pull loose. Long cords of gut, or twisted grass served them as lines. Soon the sea people were fishing from rafts, in the river, or from the rocks along the sea coast, and as they caught more, and bigger fish, they found it easier to get food in this way, than by hunting in the back country for wild animals. Thus they had fewer and fewer skins and furs to keep them warm, and this fact caused them to discover a way of plaiting and weaving cloth out of the tough marsh grasses, to use as a covering for their bodies in winter time. [206]

Isn't it curious to think that learning how to make fish-hooks should also have taught them weaving? and yet it did, as you can see. All during the cold weather in the valley Ka-Ma and his wife had been used to wearing cloaks of fur, had been in the habit of sleeping in warm, cosy caves, in which, in the coldest weather, a fire was kept burning. The hair on their bodies, like that of all the cave people, had grown thin, and no longer served to keep them warm. Their children by the sea were born the same way, with very little hair; they could not stand the bitter cold of winter without some covering for their bodies. At first, when the sea tribe was small, it was an easy matter to go into the back country, far up the river, and [207]

kill bears and other wild animals for their furs. As the years passed, and the tribe grew larger and larger, this was no longer easy, for the young men of the tribe, while brave swimmers and fishermen, had forgotten, or never learned, how to attack and kill the wild beasts which lived inland. So the sea people had to look about them, to find some other material out of which they could make clothes.

From the time they built their first brush huts, they had learned how to plait together the long reeds, in making roofs. Later, the art of fishing taught them how to twist the finer grasses, long and tough, into thin strong cords. By tying a row of these cords between two poles, and then weaving other cords in and out across them, the sea people found they could make a thick, tough, durable sort of cloth, like grass matting. It was not warm, like fur, but it would keep off the cold rains, and was much better than no covering at all.

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Leather, too, they learned how to make from the skins of some of the animals they found in the sea; great creatures, like walrus, or seals, that they fought and killed on the rocks along the coast. Living as they did more in the open air than the valley people, sleeping in huts instead of caves, wearing few furs, they grew tougher and stronger than the people in the valley, and were very brave and hardy and daring.

With their cords of grass, they learned before long to make nets, with which they caught fish in the river, wading in the water and pulling the nets between them. They lived on fish and wild fowl; they knew little of the fruits, nuts or roots which the valley tribes ate. Sometimes hunting parties went up the river, and brought back fresh fruits, but not often. It was toward the sea that they turned for new adventures.

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CHAPTER XVI

MA-YA BUILDS A CANOE

FOR a long time after Ka-Ma and his wife came to live beside the sea, his children and his children's children continued to use rafts, made of logs tied together, for floating on the waters of the river. They never ventured on the ocean with these rafts, because of the heavy waves, and surf. Once or twice a raft was swept from the river into the sea, but the waves dashed over it, washing the men upon it into the water, and finally tossed it like a cork through the foaming surf and left it, battered and broken, on the beach. Some of the sea people were drowned in this way, and this made them very careful when they used their rafts upon the river.

There was a young man in the tribe named Ma-Ya, who used to sit for hours on the beach, looking out across the ocean, and wondering what was on the other side. He thought the ocean was a very wide river, too wide for him to see across, but he believed that if he could find some way of reaching the other side, he might find a new country, filled with strange adventures. The early men who lived by the sea always felt this call to cross its wide surface, and find new lands. It was the spirit which drove the early Norsemen, the Vikings, to Iceland, and later on, all the way across the Atlantic to the shores of North America, many centuries before Columbus made his first voyage. It sent these same Norsemen southward, around the shores of Spain to the coast of Africa, and into the Mediterranean Sea until they came to Italy, and even to the shores of Asia. But all this was thousands of years later, when man had learned how to build stout ships out of wooden planks, driven by long rows of oars, and sails.

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Ma-Ya, sitting on the beach, made up his mind that some day he would cross the Great Water, and see what was on the other side. He believed there was land there, because he often saw flocks of birds winging their way inland from the sea, and he felt sure that in the place from which they came there must be food for them to eat, and trees for them to nest in, just as there were in his own country. But he knew he could never venture to make such a voyage on a clumsy raft.

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One day, while fishing along the banks of the river, he saw, floating in the water, a dry leaf. A caterpillar had spun his cocoon in it, and with his web had drawn together the ends and sides of the leaf in such a way that it took the form of a perfect little canoe. When Ma-Ya saw it, it was gliding rapidly down the stream, dancing over the little waves like a bit of thistledown. In the centre of it lay the single passenger, the caterpillar in his cocoon.

Ma-Ya thought how nice it would be if he had such a boat to ride in. He thought about this a great deal, and finally an idea came into his head. Why could he not make himself a boat shaped like that, large enough to carry him and one of his companions upon the surface of the water? But it was a long time before he found a way to do it.

The sea people had learned a great deal from twisting and weaving rushes and reeds together to form the roofs and framework of their huts. Ma-Ya thought that in this way he might use reeds to make the framework of a boat.

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So he got a great pile of reeds and wove them into a large round basket, shaped something like a bowl, and big enough to hold him. Then he covered the basket with the skin of a sea animal he had killed, tying the edges of the skin to the rim or edge of the wicker bowl. When he put his new boat in the water, it floated very nicely, but it had a bad habit of turning round and round, no matter which way he paddled. Still, it was much lighter than a raft, and could be used to cross the river in, or to fish from in quiet pools. But Ma-Ya was not satisfied with it; he wanted a boat which would be longer and narrower, with pointed ends, so that it could be more easily driven through the water. So he kept on thinking and thinking.

These round basket-work boats were called coracles, and sometimes, instead of being covered with skins, they were made by plastering all over the basket-work surface a kind of pitch that the early people found oozing from the ground. They were not very useful boats, however, and that was why Ma-Ya made up his mind to

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build a better one.

At last, after thinking about the matter for a long time, he found a way. First he took two long, stout poles of seasoned wood, such as the tribe used for making the handles of their spears. These two wooden poles he laid side by side on the ground, and then bound their ends tightly together with leather thongs. When this was done, he pulled the two poles apart in the middle, bending them like two bows until they were about three feet apart. A stick of this length, placed between the two poles in the middle, kept them apart. He now had a strong framework, very much the shape of a long, narrow leaf, pointed at each end, and widest in the middle.

When this was done, Ma-Ya got another pole about three feet longer than the framework, and bent the two ends of it upward at right angles to the main part of the pole. These bent ends, which were about eighteen inches long each, did not bend upward sharply, like the upright leg of the letter "L," but sloped upward on a curve, like the sides of the letter "U." Then he fastened the two uprights to the ends of his framework, with the straight part of the pole eighteen inches below it. This gave him the main framework of his boat. Then he took many strong slender reeds and bent them U-shaped, fastening the middle or bottom of the "U" to the bottom pole, and the two ends to the two upper or side poles. Because these side poles were widest apart in the middle, the U-shaped reeds were wide and flat there, but toward the two ends of the boat, the "U" shapes became narrower and narrower until at the ends they were shaped like a narrow "V." These bent reeds formed the ribs of the boat, and were held in place by wrappings of strong cord.

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When they were all in place, Ma-Ya took more reeds and wove them in and out lengthwise of the boat, between the ribs, making a coarse basket-work, just as he had done in making his coracle. The framework of the boat, when done, looked like a coarse wicker basket made in the shape of a canoe.

For a covering, Ma-Ya used the back part of the hide of a great walrus he and some of his companions had killed upon the rocks. This hide, while still moist and soft, was placed upon the wicker framework and drawn over the upper edges, or gunwales, of the boat and fastened with thongs. At either end the hide was stretched tightly upward, and bound to the tops of the two posts or uprights at stem and stern. There were no openings or seams in the hide whatever, so that there could be no leaks. When the hide had become dry, it stretched tightly over the frame, and became very hard and tough, yet the canoe was so light that Ma-Ya could lift it in his two hands.

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He placed it in the water, and with a paddle such as the sea people used for their rafts, climbed aboard.

It did not take him long to find out that his canoe was very easily upset. If he leaned too much to one side or the other, it would turn over, and leave him to drag it ashore and empty the water out of it before trying again. After a while, however, he got used to the new boat, and found that with a few strokes of his paddle he could send it through the water at great speed. His companions, who had laughed at it, at first, soon saw that Ma-Ya had made something that would be very useful in fishing, and in getting about on the water, and they too began to build boats of wicker-work, covered with skins. Up to now, the sea people had found it very hard to paddle their heavy rafts up the river, owing to the strong current, but in the swift, light canoes they could go wherever they pleased.

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Ma-Ya's idea, however, was not to go up the river, so much as it was to sail on the ocean. As soon as he had learned how to manage his new craft, he allowed the current to sweep him through the river mouth and out on the broad surface of the sea. It was a quiet day, with no wind blowing, and Ma-Ya found that his little craft rode the long ocean swells as lightly as a cork. He paddled about for several hours, delighted with his success, and then drove his new boat back into the river mouth and pulled it up on the shore.

The next day he told one of his brothers of his plan to try to cross the Great Water and see what was on the other side, and the two adventurers placed provisions, and some jars of water, in the canoe, and started out.

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This time, however, there was a strong wind blowing from the ocean, making its surface very rough. What had seemed to be only tiny waves, from the shore, turned out to be dangerous white-caps, which swept over the frail craft ready to fill it with water. The wind,

too, became stronger, so that Ma-Ya and his companion could hardly paddle against it. Stronger and stronger grew the gale, and more and more weary grew the arms of the two paddlers. Soon they saw that instead of making any headway, they were being slowly driven back toward the shore. Their water jars had been upset by the plunging of the boat as it tossed in the waves, and more and more spray came aboard with every gust of wind. Ma-Ya became afraid, and told his companion they must try to paddle back to the mouth of the river.

This, however, they soon found they could not do. The gale had driven them a mile or more down the beach, and they could not force the boat back against it. Light as it was, and floating on the surface of the water like a leaf, it was at the mercy of the wind. In a few moments the two voyagers saw that they were being driven right toward the surf which thundered on the sandy beach. They paddled furiously, trying to keep the bow of the canoe pointed toward the shore, and waited to see what would happen. The great breakers lifted the tiny craft in their arms as though it had been a speck of foam, and hurled it round and round toward the beach. In the twinkling of an eye it was filled with water, upset, and Ma-Ya and his companion were left struggling in the waves. Luckily they were strong and fearless swimmers, and after a long fight, managed to make their way through the surf, almost battered to pieces. The sea folk, who were gathered on the shore watching them, ran down into the water and pulled them up on the beach. The little canoe was washed in and out again for many minutes, rolling over and over in the boiling surf like a huge fish, but at last it too came tumbling upon the sands, crushed and broken. The sea people pulled it up out of reach of the waves, and Ma-Ya gazed at it sadly. He knew now that while his frail craft was good enough for sailing on the river, it would never do for crossing the Great Water. So he made up his mind to think of something else.

It was many years before Ma-Ya made his next boat, and this time it was of wood.

He knew that the shape of his little canoe had been right, but that to stand the waves of the Great Water it would have to be made of something much stronger and more solid than wicker, covered with skin. The only thing he knew of was wood, yet his brain, which was only just beginning to think, told him no way in which he could make a boat out of wood.

One day, while far up the river in a canoe, he came across a huge log, the trunk of a tree, which had been blown down by the wind. It had drifted along the river from the forests above, and finally stuck on a mud-bank, where it was held by its dead branches.

Ma-Ya climbed up on this log and looked it over carefully. Something about it made him think of a boat. This was because the tree was partly hollow; a long stretch along one side of it had rotted away. Ma-Ya cut at the rotten wood with his stone axe, and found it soft and crumbly. He thought that if he and some of his companions were to dig out the centre of the log with their axes, and roughly chop the two ends to a point, they would have a large and strong boat, which even the waves of the ocean could not harm. It would take a long time, he knew, but he had nothing to do, and some of his friends, to whom he had told his plan to cross the Great Water and see what was on the other side, offered to help him. The next day, with axes and chisels of sharp flint, a little party went up the river to the mud-bank where the log lay, and began work on it.

The pointing of the ends was a long, hard task, but little by little they cut away the dry wood, and after many weeks the outside of the log began to take the shape of a boat. The task of digging out the inside was easy at first, where the wood was soft and rotten, but after a time the rotten wood was all cut away, and then the work became very hard. Knowing that fire would burn away the wood, Ma-Ya told his companions to start little fires all along the surface on which they were working, and when the fires had charred the inside of the log a little, they put them out and chipped away the burned wood. Over and over again they did this, for many weeks, and at last the inside of the log had been cut away until there was room in the new boat for fifteen or twenty men. Its sides were very thick and strong; they did not dare to burn away too much of the wood, for fear they would make a hole right through it. When it came time to push the new craft off the mud into the water, they found it so heavy that they were obliged to call for help. Finally, with thirty or forty men pushing and pulling, the great boat was slid

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into the water, where it floated almost as well as the lighter canoes. With paddles in their hands, Ma-Ya and a dozen of his friends scrambled aboard, and sent the new craft flying down the river.

Ma-Ya and his friends made many voyages on the ocean in this boat, but although they sometimes paddled for two whole days, they never were able to cross the Great Water. No matter how far they went they could see nothing beyond them but the blue surface of the ocean, stretching as far as the eye could reach. All of Ma-Ya's friends said that there was no other shore to the ocean; that it went on and on until it joined the sky, but Ma-Ya refused to believe this, because of the flocks of birds he watched coming in from the sea. But he never found the other shore of which he dreamed.

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One thing, however, he did discover, a very great thing indeed, although Ma-Ya did not know, then, how great it was. He found out how to make the wind move his boat, by using a sail. And like nearly all of the discoveries of the early people, it was made by accident.

Sometimes, in the middle of the summer, the sun on the water became so hot and burning that the men paddling the boat could hardly stand it. It was warmer in summer, in those days, than it is now, and the blazing rays of the sun often made the handles of the paddles so hot the men could scarcely hold them. To keep off the sun, Ma-Ya would lash some upright poles to the sides of the boat and hang from them a cover, or awning, made of grass-cloth. One day, while paddling up the broad mouth of the river, a squall came up behind them, and striking the awning, turned it sideways, like a sail. At once the boat began to fly through the water so fast ahead of the squall that the paddlers found their work of no use, and drew in their paddles. Ma-Ya set up a great shout and pointed to the sail. His companions did not understand at first, but when they saw the boat sailing along without their paddles being used, they too understood, and also began to shout. Not knowing how to stop, they sat doing nothing while the heavy squall carried them far up the river and finally drove them ashore on a sand bar.

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Ma-Ya was delighted. He lashed a stronger upright pole near the front of the boat, with another pole across it, from which he hung a large piece of grass matting, and the next time they went out, the wind took them along in fine fashion. Coming back, however, they had to use their paddles, for Ma-Ya did not know how to sail against the wind, nor did the sea people discover how to do this for a very long time.

Ma-Ya was a great inventor. He gave to the sea folk boats and sails. But he was never able to cross the Great Water. When he died, he called his children and grandchildren about him, and told them to keep on trying, and some day they would find the land of the flying birds.

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CHAPTER XVII

THE CONQUERORS

MANY hundreds of years had passed, since Ka-Ma and his wife Tula left the valley, and the tribe of the cave people had grown very large. The whole valley was now filled with them, and they had spread out over the hills which surrounded it, and far into the country beyond.

The head man, or chief of the tribe lived in the largest of the rock caves, and had many wives and children. Those who had gone outside the valley formed separate tribes of their own, each with a smaller chief, but all of them were under the rule of the head chief.

The rocks all about the valley sides were honeycombed with caves, and as the tribe grew, and there were not enough caves for all, these bands of adventurers would leave the valley, and make new homes of their own on the hillsides, and in other valleys beyond them.

There were no longer any animals to be killed for food in the valley of the caves, and the people there gave up being hunters, and spent their time making things, such as pottery, stone implements of all sorts, weapons, leather, moccasins, and smoked meats and fish. They were the workers, while the tribes outside were the hunters and fishers. When any man in the outside tribes killed more deer, or caught more fish, than he needed, he would bring them to the people in the valley, and exchange them for spear heads, smoked meats, pottery, tanned leather, or any of the other things he needed. This was the very beginning of barter, or trade. When one tribe had more than they needed of one thing, and another tribe had more than they needed of another, they would exchange with each other, so that both were better off. This trading of things between peoples is what makes up the business of the world to-day. If the people in the United States have more wheat, or beef than they need, and the people in England have more leather goods, or cutlery, or woolen cloth, or the people in France more silks and satins, we send our wheat or beef, or cotton to them, and bring back their leather goods, or cutlery, or silk.

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In the beginning, it was very easy for a hunter to bring a bundle of skins, or a string of fish into the valley, and exchange it for what he needed, a stone axe, or a leather coat, or a pottery bowl. Later on, when the tribes of men had spread far over the country, it often happened that the hunter who brought a bundle of skins to one tribe, did not want to buy anything from that tribe, but instead, wanted to go to some other tribe, a long distance off, to get something they had which he particularly wanted. This made a difficulty, and to overcome it, something was needed that could be exchanged with any tribe, and yet could be easily carried about, on long journeys. So the people began to use beads, and later on, when metals had been discovered, ornaments such as bracelets, or rings made of copper, or gold, and these beads and ornaments became the first money used by man. But this came later on; now the traders exchanged one thing for another, just as they do in savage countries to-day.

There were some grasses which grew in the valley, which bore tiny hard seeds or grains on their tops, and for a long time the cave people had made use of these grains for food, when other things were scarce. After a while, they noticed that if they let any of these grains fall in the soft earth, they would grow up again, and have more grains on them. They saw that this was an easy way to get food, so they took the grains and planted them, scratching up the hard ground with the points of their spears. Later on they made a tool something like a hoe, by fastening a sharp piece of stone crosswise at the end of a stick, and used this to loosen the ground for planting the grain.

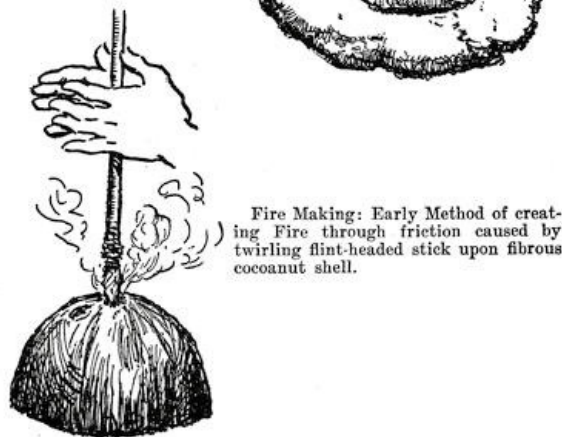
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All the grains, such as wheat, corn, rye, or oats, the roots, such as potatoes, beets, carrots, parsnips, and the like, and the many other vegetables we eat, once grew wild, and were very small and hard. But every sort of plant grows better, and has larger seeds and roots and fruit, if it is cultivated, that is, if the soil in which it grows is loosened up and made soft, so that the rain can easily get to its roots, and the roots can spread out, sucking moisture and chemicals

from the ground. For this reason the early men found that the grains, or roots which they planted, kept growing larger and better to eat, year after year, and as the valley and the country around it became filled with people, and food became scarce and harder to get, the people in the valley who did not move away began to plant and grow many of these roots and grains, and they were the first farmers. As Mother Nature had so often told the Sun, it was the search for food, the struggle to keep alive, that taught the first people almost everything they knew.

At first, the people chewed the hard grains, and swallowed them, just as they would eat nuts, but it was a good deal of trouble to do this, so while the men were away hunting, the women would take the grains and pound them up in a hollow stone, with another stone, round and smooth, and sometimes having a handle to it. This made a coarse kind of flour. Adding a little water to it, they mixed a sort of paste, which they moulded into little cakes and placed in the sun to dry. In this way they made the first bread. Later on, instead of drying these cakes in the sun, they found they could do it more quickly by placing them on flat stones, heated very hot in a fire, and these cooked cakes of oats, and wheat and rye soon became one of their chief articles of food.

They found it easy to keep the grains and roots during the winter by storing them in their caves, usually in great earthen jars. They tried to keep some of the fruits in this way too, berries, and wild grapes, but the fruits would not keep. Instead, they turned sour and fermented, forming wine, which the people drank, when they were tired, and cold, to cheer them up. Among the very earliest peoples of which we have any record, wine was used; we find it spoken of often in the Bible, and the writings on the tablets of clay dug up in the most ancient ruins. Living as they did a rough life in the open air, these early peoples could drink wines without harm. It was not until thousands of years later that men found out how to distil the strong spirits and liquors which are so harmful to people living the indoor lives we lead to-day.



EARLY METHODS OF BREAD AND FIRE MAKING

The valley people were by now no longer savages. Even in the arts they had made some progress. Their pottery bowls and jars were ornamented with designs in black, and red and other crude colours. They made ornaments of beads, and painted designs on their leather clothing, or sewed coloured beads on them, in various

patterns. The walls of their caves were covered with rude pictures or drawings, they carved drinking cups from the horns of the animals they killed, and their stone axes and other implements were smooth and polished, and sometimes carved with pictures and rude signs like letters. Weaving had begun among them, as well as among the sea tribes, but the cords they wove together, instead of being made of grass, were of twisted hair, or wool, scraped from the skins of animals. They were much more civilized than the people who lived by the sea, for although the sea people had made boats, with sails, and hooks and nets for catching fish, they knew nothing of planting grains, or making bread from them. Each people was going ahead in its own way.

Among the hunters who spread from the valley into the surrounding country was a young chief named Ban. He was very strong and brave, and nobody in his tribe could throw the spear so far, or strike so hard a blow with the axe. Being a mighty hunter, he pushed farther and farther away from the valley, always seeking the places where the most game was to be found. Year after year he and his tribe moved nearer to the sea, but this they did not know, for they had never seen it.

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One night, while chasing a huge bear, Ban and his hunters reached the top of some low hills, and here, having killed the bear, they made a camp and slept. In the morning, Ban, who had climbed upon a tall rock, found himself looking over a great wide valley, which sloped down and down, mile after mile, until the far side of it was lost in the morning mists. Soon the sun dried up the mists, and there, far away, was a wide strip of water, shining in the early sunlight like a river of silver. Ban called some of his companions to him, and they gazed at it a long time in silence. They knew it was water, but they did not know it was the ocean, but supposed it to be a great river.

Ban was tired of living in the hills, and wanted to find a new home where fish and game were more plentiful, so he told his companions to go back and bring up the whole tribe.

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Soon they came, several hundred of them, the young men with their weapons, the old men, the women and children bringing the pottery bowls, the furs and skins, the food. They left the brush huts they had been living in, and swarmed down the slope of the hillside like so many bees. Whenever the early tribes got tired of living in one place, and decided to find another home, they moved like this, in a great swarm, just as bees do when the hive becomes overcrowded, and some must seek a new place to live in. Later on, when there were many more people on the earth, these great movements or migrations of tribes and races were made by hundreds of thousands, and even millions, wandering through the country for thousands of miles, destroying everything in their path, and finally coming to rest in a new home, and founding a new nation.

Ban and his people moved slowly toward the sea, hunting and camping as they went. At last one day they came to the seashore, and stood on the smooth white sand, gazing at the ocean in wonder. They saw no one about, and there was very little to eat, so they set out along the shore, hoping to find a better place to make a camp.

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For two days they wandered along the ocean, shooting wild-fowl, catching some turtles, and killing a few seals they saw on the rocks. When they found they could not drink the ocean water, some of them wanted to go back to the hills, but Ban would not let them.

"Let us keep on," he said. "Somewhere there will be water we can drink." So they went on, slaking their thirst with the blood of the birds and animals they killed, or with rainwater they found in hollows in the rocks.

On the third day, some of Ban's men, who had been going on ahead, came back, and said that they saw smoke rising into the air, far up the beach. They thought it might come from the fires of one of the other valley tribes, on a hunting trip. Ban gave the order to hurry on.

Soon they came to a point of rocks, on which there were many seals. Far out on the point they saw some men, hunting them. Ban's people set up a great shout to these men, who stood looking at them in surprise.

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Ban and some of his fighters called to the strangers, and the men on the rocks called back, but neither could understand what the others said, for in all the many years the children of Ka-Ma and Tula

had lived by the sea, they had made a new language for themselves, different from the language of the people of the valley. When the hill people heard these strange words, and saw the grass-cloth clothing the sea people wore, they knew them to be strangers, and not of the valley tribe. This at once made them enemies, and they began to throw stones at them with their slings, and to shoot at them with arrows, and hurl their spears.

The little band of sea folk fought back as best they could, but the hill people were too many for them, and soon they were all killed. Then the hill men took their weapons, and ornaments, and clothing, and divided them up, and went on, shouting, toward the smoke they had seen.

They found other bands of the sea people along the shore, and some fought and were killed, while others ran swiftly back toward their homes to give warning to the tribe.

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When Ban and his men reached the village of huts, a little army of the sea tribe stood ready to give battle, but they were not many, for most of the young men were away in their boats, fishing.

A terrible fight now began. The sea folk tried bravely to defend their homes, and killed many of Ban's men, but there were not enough of them, and before long they were overcome. Then the hill tribe swarmed down on the village, killed the old men and children, and took the women prisoners to make them slaves. The village they set on fire and burned.

Some few of the women escaped, and ran down to the shore of the river, near where it emptied into the sea. Here a path led to some rocks, where the fishermen got aboard their boats.

A great log canoe, seeing the smoke from the burning village, came quickly down the river, with ten men on each side paddling as hard as they could. They knew that their people were in danger, and came to save them. As they reached the little landing, the women who were huddled there cried out to them, telling them that a great army of strange men had killed all their companions, burned the village, and taken the women prisoners. At first those in the boat wanted to come ashore and fight, but in a moment Ban and his followers came crowding down toward the landing, shouting, and throwing stones and shooting arrows. So the men in the canoe quickly dragged the women aboard, and paddled away from the shore, out into the middle of the river, where the hill men could not get at them. Here many of their companions, who had been fishing in other canoes, joined them, shouting with rage at the enemy on shore, and shooting at them with bows and slings.

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The battle raged in this way for hours, but although more of the sea people came up in their boats, they were not nearly as many as the hill men were, because most of the tribe had been lost in the first battle, defending their homes. So they dared not go ashore, for they knew if they did they would be killed.

All night they stayed in their boats, calling out in rage against their enemies, who shouted back, daring them to come ashore and fight. In the morning a storm came up, and scattered the boats. Some of them were driven ashore, and the men in them captured or killed by the hill people. Some were driven out to sea, and being small and light, were sunk. But the great log canoe in which the women had taken refuge had a grass-cloth sail, and the storm drove it far out over the ocean.

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There was a young chief in this boat named Tul-Ab, who was strong, and skilful and brave. He divided the water they carried among the men and women, and gave them fish, which they had caught, to eat, and sat in the stern of the boat all night and guided it with a paddle, to keep it from being upset by the waves. He had heard, when a child, of the land of the flying birds across the Great Water, and he hoped that the storm might carry them there, and so save their lives.

By the next afternoon the weather had cleared, and Tul-Ab saw in the distance a high, rocky coast, against which the waves were beating fiercely. He roused the men in the boat, and told them to take their paddles and keep the canoe from being driven ashore until he could find a safe place to land.

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After a time they came to a place where a river ran through the cliffs into the sea, and here they found a little harbour, and were able to make a landing on a quiet beach. Tul-Ab's companions went ashore and threw themselves on the sand, tired out after the terrible night. But Tul-Ab went in search of water, and found some in

hollows in the rocks and filled their jars. Then they caught some fish, and made a fire to warm themselves, and spent the night in some holes in the side of the cliff.

All these things the Sun had been watching, and he was sorry to see the sea folk destroyed. When Mother Nature came to look at the earth, he spoke to her.

"What is the use of making such a nice tribe by the sea, and then letting the people from the hills kill them?" he asked sourly.

"They are not all killed," Mother Nature replied, laughing at him. "I wanted some of them to go to that big island they have just found, and so I let Ban and his people come and drive them there."

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"Why did you want them to go to the island?" asked the Sun. "Weren't they getting along very nicely where they were?"

"Yes. They learned many things. But here, on this new island, they will learn much more. It is a very large island, as you can see, and there are metals on it, and many other new things for them to find out about. If I don't spread my new men around a little, they will always stay in one place, and the earth will never be populated."

"It is a pity they have to fight, and kill each other," the Sun said.

"Yes," said Mother Nature. "It is a pity, but men are going to keep on fighting and killing each other for thousands and thousands of years. The battle you saw between the sea people, and the tribe from the hills, was the beginning of war. These two peoples hated each other, because their language, and their clothes, and their ways of living, were different. And as one tribe hates another, for these reasons, so will nations, which are only great tribes after all, hate each other, and fight and kill, for a very long time indeed, even after they have become what they call civilized, and fight with terrible engines of war, which fly in the air, and swim under the water, and blow thousands of persons to pieces in a single moment. That is the law of force, that the strong must overcome the weak, and only when man has become really civilized, and learned the law of love, will fighting stop. They have to fight now, for in that way they become strong, and brave, and get courage to conquer the winds and the sea, and the cold and heat, and spread to all the parts of the earth. Not until long after this is done will men learn that they all belong to one great tribe, and that it is not necessary to fight each other any longer, but to help each other. It is the same on all my other worlds—the people fight each other for a long time, like bad children, until one day they find that they are not children any longer, but grown up men and women, and then they do not fight any more."

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"I should think that God would make them that way in the first place," grumbled the Sun.

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"He could, you foolish creature," said Mother Nature, with a frown, "but if He made His people and His worlds perfect to begin with, there would be no need to create them at all. God is like a weaver, weaving a wonderful pattern. He finds joy in His work. If it were all finished as soon as it was begun, even God Himself would have no purpose. All things must grow slowly and beautifully, from the seed to the plant, from the plant to the tree, from the tree to the perfect fruit. You, Sun, are growing too. Some day, your heat will be gone, and you will grow old and die. You will be cold, and dark, without any light to shine with. Then it may be that the Great Mind that made you, will cause you to live again. Meanwhile, do each day what you have to do, and stop grumbling about things you do not understand."

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CHAPTER XVIII

THE ISLAND MEN

THERE were twenty-two men and eight women in Tul-Ab's little party. The great log canoe had been crowded.

The place where they landed was a little harbour at the mouth of a small river, with high cliffs on either side of it, and a narrow beach at their feet. They managed to catch some fish in the bay without much trouble, and to find dry brushwood for fire, but there was no water to drink, except the little they had found in the hollows in the rocks, left there from the rainstorm of the night before. The shallow caves in which they slept were only holes in the rock.

When morning came, Tul-Ab and some of his men began to climb up the cliffs, in search of water, and a place to make a camp. They did not like the small caves along the shore; they wanted to be higher up, where they would be safe from attack, and where they could build brush huts of the kind they had always lived in. [246]

They found a smooth grassy place at the top of the cliffs, from which they could look far out over the sea. There were no trees on the cliff top, but only some low bushes. A stream, however, came from the rocks higher up and crossing the little plateau, tumbled over the edge of the cliffs into the sea. All over the surface of the plateau were many flat rocks, some small, some very large and heavy. An easy path down the side of the cliff led to the beach below, where they had spent the night.

Tul-Ab and his men were troubled, because they found nothing about them the way it had been in their other home. There were no trees on the cliff tops with which to build huts; they saw some, on the hills further back, but they were small and stunted. Nowhere did they see any of the marsh grasses and reeds they had used so much in making their houses. Yet they liked the place they had found for a camp, because it was high and safe from attack, in case Ban and his hill men should come after them from the other shore. Tul-Ab looked about and saw nothing but rocks, and the thought came to him, why not build houses for themselves out of these rocks. [247]

He picked out a great flat boulder near the stream, and he and his men dragged up other boulders, and arranged them in the form of a square. On these they placed more stones, choosing the flat ones, until they had built four walls, as high as their heads. In one of the walls they left a hole for a door, placing over its top a long, flat stone, to keep the wall above from falling down. The front wall they built higher than the back, so that the roof of the house would slant, to make the rain run off.

The roof bothered Tul-Ab a great deal. If he had had reeds and marsh grass, he would have known what to do, but he could find none. With his men he went farther up the hillside and cut down many of the short stunted trees, and these they laid side by side across the walls of the house to make a roof. There were spaces between these logs, through which rain would come, so they cut sods of earth from the grassy surface of the plateau, and covered the roof with a thick layer of them, with flat stones on top to hold the sods in place. When the house was done, Tul-Ab took it for his home, for he was the chief, and he also took one of the women for his wife. [248]

When the first stone house had been built, the little tribe built others, until there was room for all to sleep protected from the rain. Not knowing what wild animals, or even men, might live in the woods further back from the shore, they also built a stone wall across the neck of the plateau, so that on one side their camp was protected by the cliffs leading down to the ocean, and on the other, by this wall of stone. They brought great piles of firewood into the camp for cooking the fish they caught, and the waterfowl they shot with bows and arrows, along the shores of the little bay at the foot of the cliffs. Every day the men went out hunting and fishing in the canoe, sometimes on the ocean, when it was smooth, and at others, on the bay, or up the river which ran into it. They could not go up this river very far, because of the rocks in it, which made rapids, over which the boat could not pass. But they often went beyond the rapids on foot, and brought back wild hogs, and many small furry animals they had never seen before, and sometimes bears and [249]

horned deer.

Having no marsh grass from which to weave cloth, the tribe began once more to use skins and furs for clothing, and to eat more meat, and less fish, than they had eaten in their old home. The country of the sea people had been flat and marshy, while that of the valley tribes was hilly and far from the sea, but in the new home of Tul-Ab and his tribe, they found both the hills and the sea, close together, and so they grew to be like both the sea folk, and the people of the valley and the hills from which they had first come.

Already, in building things of stone, they had done something that men had never done before. Instead of living in caves, or brush huts, they had built houses of stone, and a stone fort. This was a new thing, and from it they began to learn to be carpenters. As the tribe got larger, and more houses were built, they found they could make the roof logs fit closer together by chipping off the two sides of them, and so they made the first hewn timbers. It was not long, before they found they could split the logs with stone wedges, and in this way make rough planks, or boards. These boards they fastened to cross pieces with wooden pegs, to make doors for their houses to keep out the wind and snow and rain.

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The women they had brought with them had children, and these children grew up and had more children, and before very long there were many hundred people in the tribe, and their stone huts dotted the cliffs as far as the eye could see. When they found there was not room enough behind the first wall for the growing village, they built another and longer wall, further back from the sea, for they were always afraid of being attacked, on account of the way their former village had been destroyed. Only the very oldest men remembered this now, but they told the story to the younger men, around the fires at night, and when these grew old, they told it to their children and grandchildren, so that it became a legend in the tribe that they had come from another country, where enemies lived who might attack them. A watchman stood day and night on the cliffs, looking out over the sea, ready to light signal fires, in case he saw boats coming toward them from across the water.

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The island people found plenty of flint, out of which to make weapons and tools for working wood, and they were very skilful fishermen, and also great hunters with the bow and arrow. As they made hunting trips far back into the country, they found many different kinds of wood for making bows and small canoes, but no reeds were to be found, so they forgot the art of making basket work. Neither did they find any clay, for a long time, and when the few bowls and jars they had brought with them were broken, they made drinking cups of the horns of animals, or of wood. They still used smoked meat and fish, but they knew nothing about planting and growing grains to make bread.

These people were great workers in wood and stone. They worshipped the Sun, and built a temple to him of huge upright stones, set in a wide circle, with a flat altar stone in the middle, on which they placed their offerings of meat and fish. These offerings they burnt with fire, because the priests of the temple told them it pleased the Sun to smell the smoke of the burning flesh as it rose up in the sky. Twice in the year they had great feasts. One was when the days began to get longer, in the spring, and fruits and flowers began to grow. This time is in March, and we call it the vernal equinox, because then the days and nights are of equal length, and equinox means equal nights. From then on, until June, the days grow longer and the nights grow shorter. From June till September, the nights grow longer and the days shorter, until once more they are the same length, and this is called the autumnal equinox. Then the island tribe held another festival, the feast of the harvest. After that the nights began to grow still longer, and the days shorter, because the sun was going away from them more and more, all through the cold winter. Even to-day we remember these two festivals, by offerings of flowers in the spring, at Easter time, and by the harvest feasts which country people still hold in some places at the end of the summer, when the harvests are gathered in.

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The island people built their houses and temples of stone. With wood they at first made only roofs and doors, but it was not long before they began to use it for building other things, such as boats. They found no big trees of soft wood on the rocky hillsides, out of which they could make large canoes. So they hewed planks out of the smaller trees, and built the first wooden ships made by man. They could not be called ships, at first, for they were only small

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boats, but as time went on they built them larger and larger until they would carry forty or fifty men.

Modor was the first man to build one of these boats and he was a skilful carpenter. He hewed a long heavy keel for his boat out of a tree trunk, and at each end he set up a stout post, one for the stem, the other for the stern. Wooden braces, or knees, as they are called, fastened by pegs, held the posts to the keel. Modor's tools were heavy stone axes, wedges of stone to split planks with, saws, made of jagged, toothed pieces of flint, with wooden handles bound to them, sharp flint knives for making wooden pegs, and drills, for boring holes for the pegs. With such rough tools it was not easy for Modor and his companions to build a boat, but they were strong and patient, and worked very hard.

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After the stem and stern posts had been fastened in place, ribs were pegged to the keel to form the frame of the boat. These curved ribs they made in two ways. One was to hew them from the crooked limbs of trees. The other was to take straight pieces of wood and soak them for many days in water, until the wood became soft and pliable, and then bend them to shape, and tie them that way with leather cords while they dried.

When the ribs had been fastened to the keel with wooden pegs, long strips of wood were bent around the tops of the ribs, from the stem post to the stern post, and fastened to each rib with a peg. This made the framework of the boat, and now it had to be covered with planks.

Modor and his helpers took the split boards they had made and bent them over the framework, with a peg at each rib to hold them, and in this way covered the whole framework of the boat. Of course a boat built in this rough way would not be water-tight; there were many joints and seams between the rough planking through which water would leak. But Modor had found, oozing from the pine trees, a black, sticky sort of gum or pitch, and this, with soft fibres from the bark of trees, he used to calk his boat and make it tight. The way he did this was to heat the pitch in a large shell, dip the fibres in it, and then drive them into the cracks with a stone wedge. In this way, after many trials, Modor at last got his boat so that it would not leak.

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He built a deck of wood over the forward part of the boat, and across the middle part he put five board seats. These seats were for the paddlers to sit on, but the paddles were so long, in order to reach the water, that they were like oars, and it was hard to handle them against the ocean waves. So Modor drove pegs into the edges or gunwales of the boat to hold the oars in place, and men thus began to row boats, instead of paddling them, as they had their canoes and rafts.

As we have seen, the tribe had almost forgotten how to weave, because they no longer had the tough marsh grasses to make cord from. But Modor twisted the fibres from the bark of certain trees into strong cords, and took them to some of the old women, who knew how to weave, and they wove him a sail from them. Then he put a mast in the middle of his boat, with a pole or yard across it, and hung the sail from this yard, with strong cords tied to its lower corners to hold it down.

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In this boat Modor and his companions made many voyages along the coast, fishing, and hunting. On one of these trips he found a marsh covered with reeds and rushes, but he did not gather them, for the tribe had no use for them now. On another voyage Modor's boat was carried by the wind across the water to a low shore. It was the same shore from which Tul-Ab and his companions had fled hundreds of years before. When Modor's boat came in sight of the beach, he saw many men running along the sand, waving their spears and shouting. Several canoes crowded with fighting men came out from the shore. Then Modor lowered the sail of his boat, and the rowers bent to their oars, and soon left the canoes and the shore far behind.

When Modor got back to the village he told the old men what he had seen, and that night around the camp fires they told again the story of Tul-Ab, and sang a song about him, and his coming to the island.

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The next day the chief of the tribe, whose name was Gudr, told the watchers on the cliffs to be very careful, and to keep their eyes always on the sea, for he feared that the people from across the water might come to attack them. But for a long time none came.

Other men in the tribe also built boats like the one made by Modor, larger ones, and they carved the heads of animals, or birds, or fish, out of wood, and fastened them at the bows of their boats, and this was the first use of figureheads, which you can see on some sailing ships even now. They painted the boats with red, and yellow and blue earths, mixed with fish oil, and stained the sails different colours with the juices of berries and plants.

One day, while digging along the bottom of the cliffs for red earth with which to make paint for his boat, Modor came across a lump of something that he at first thought was stone. It was yellow in colour, and very heavy. He laid it on a rock, and beat it with the head of his axe, expecting it would break. But instead of breaking, it flattened out, and began to shine, where the axe head struck it, like the rays of the sun. Modor was very much pleased with his find, because it was so pretty, and he beat it out into a thin strip, and rubbed it bright with a stone, and bent it like a bracelet about his upper arm. His companions, when they saw it, liked its pretty, bright colour, but beyond that, they paid no attention to it. They did not know that Modor was the first man in the world to discover a metal. The bracelet he had bent around his arm was made of pure gold.

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CHAPTER XIX

THE FIRST SEA FIGHT

THE Stone Age on earth lasted for a very long time; much longer than you would think, as you read this story. From the time when Ra made his first stone-pointed spear many, many thousands of years had passed, and still men knew nothing of the use of metals. In some parts of the earth, as the tribes migrated, and spread to new countries, stone weapons and tools were used for thousands of years longer; in fact, they are still used, even to-day, by certain savage tribes. But in other parts of the earth, men discovered metals, and how to use them, and soon the age of bronze began.

In Nature's great storehouse metals are found in two different ways. Some of them, such as gold, tin, and copper, occur free, that is, they are found in the rocks in solid veins. When these rocks are broken up by the action of the weather, or by swift-flowing streams, the bits of metal, being very heavy, fall to the bottom, and are found in lumps, or nuggets in the sand and earth along the shores.

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Other metals, such as iron, are usually found in nature in the shape of ores, and can only be gotten out of these ores by smelting, that is, by heating the ores in a hot fire.

Early man, of course, found the free metals first, and it was a very long time before he learned how to smelt ores, and make iron, and steel. The ancient Egyptians carved their wonderful statues, their huge obelisks, with tools of copper, hardening the soft metal in some way, so that it would cut the toughest stone. The secret of hardening and tempering copper in this way has been lost, and the most skilful metal workers to-day do not know how to do it.

When Man first discovered gold, the only use he made of it was for ornaments, just as Modor twisted the golden bracelet about his arm. Tin, too, although harder than gold, was of little use to him. Even copper, the hardest of the three, was too soft in its natural state to be used for anything but knives, or swords, and even these were not so good as those made of very hard stone. But when it was found that copper and tin, melted together, would form what is known as bronze, hard, tough and strong, a new era or age began, known as the Age of Bronze.

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It was long after Modor found the lump of gold, however, that the use of bronze began.

The island men kept watch from their village on the cliffs for many years, expecting each day to see a fleet of canoes come across the water from the far-off mainland, but as time passed they forgot about their enemies, and went on fishing and hunting and building boats in peace.

Then, one day, when the sea was quiet and smooth, a watcher on the cliffs saw a boat far off on the horizon, and as it came closer, others appeared behind it until there were forty or more in sight. He gave the alarm, and soon the smoke went up from the signal fires, calling all the fishing and hunting parties home as quickly as possible.

The attacking fleet was made up of many large log canoes, driven by both paddles and sails. The hill men whom Ban had led to conquer the tribe by the sea knew little or nothing about making boats when they came, but the prisoners they had taken, women, and a few men, they made their slaves, and from these they learned how to make canoes of wicker and skins, and also how to burn them out of logs. As time went on Ban's tribe became great fishermen, just as the sea people had been before them, and travellers came down from the valley, bringing grain, and fine pottery, and many other new things that the sea people had known nothing about. This made the tribe of Ban very powerful and strong; from the slaves they had learned to make fish hooks, and nets, and grass cloth and boats, and from the hill people, and the dwellers in the valley, they learned how to make bread, and wine, and to plant things for food, and make clothing of leather and skins instead of grass cloth, and much besides. Soon all the country between the valley and the sea was covered with people, and now the new tribes that wandered away from the valley went inland, settling new country, for there was no longer any room for them, in the direction of the sea.

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When the tribe of Ban, and the other tribes that now lived along

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the seacoast, wanted to find new places where there was plenty of game, there was nowhere for them to go. The sea stopped them. But they knew, when they saw the boat of Modor sail along their coast, that the old legend about the land of the flying birds was true, and that somewhere across the Great Water was a new country, where there might be plenty of game, and room for them to live. So a thousand of them, in fifty great canoes, twenty men to a canoe, set sail on a voyage of discovery. It was their boats that the watchers on the cliffs saw coming toward them.

When the smoke signals went up, all the boats of the island men came flying home, and gathered in the bay below the cliffs. The entrance to the bay was narrow, and they decided to fight from their ships, and keep the enemy's boats out. Unless these could get into the bay, there was no way in which the men in them could climb up to the village on the high ground above, for the cliffs on the ocean side were much too steep to climb. [264]

The invaders lowered their sails and paddled about the mouth of the bay, trying to make up their minds what to do. They had not expected to find such a rocky shore, for their own coast was flat and sandy. Then suddenly they decided to sail into the bay and attack the ships of the island men inside.

The island men's ships were larger and higher out of the water than the log canoes, but there were not nearly so many of them; less than thirty in all, some large and some small. Their sails were lowered, but rowers manned the oars, while on the decks forward stood fighting men, with spears, slings and heavy rocks, and bows and arrows. Along the shore of the bay, at the foot of the cliffs, more fighting men stood, while above, in the village on the plateau, were the women, the old men and children, all ready to roll great stones down the path which led up the cliff, in case any of the enemy should try to climb up that way.

The canoes of the invaders swept into the bay through its narrow mouth, and at once dashed toward the opposing fleet, their crews cheering and shouting. At the same time the boats of the island men advanced to meet them, led by Modor, who had become the chief of the tribe, now that Gudr was dead. Modor, whose vessel was in the lead, told his men to row as hard as they could, straight at the first canoe. The tall prow of his boat hit the canoe and crushed in its side, so that it sank, and all the crew were thrown into the water. This battle was the very first sea-fight, and Modor was the first man to ram an enemy's ship. [265]

Other ships belonging to the island men came up, and other canoes were rammed. The men in the water tried to climb aboard the ships, but they were struck with axes, or pierced with spears, so that the water of the bay was red with blood. But the island men did not have things all their own way. Some of the canoes attacked the ships in pairs, one on each side, and their crews sprang aboard and fought with the island men on the decks, so that many were killed on both sides.

Some of the sea people ran their canoes ashore, and jumped out on the sand. Here they were met by the defenders on the beach, who fought with them to protect their homes. [266]

The battle raged with fury for two or three hours, but at last, when many of their boats had been sunk, and the crews killed, the sea people gave up the fight and paddled out of the bay.

Modor now gave a great shout and called to his men to follow in pursuit. The ships, with their long oars, were faster than the canoes, in the rough water outside the bay, and rammed and sank many of them. Only twelve out of the fifty that came, managed to escape; their crews paddled away with all their might, and soon they were mere specks in the distance.

Then Modor and his ships came back to the bay, the wounds of his men were washed and bound up, and a great feast was held that night to celebrate the victory.

In the enemy's canoes that had been driven up on the shore they found all sorts of provisions; cakes made of grain meal, and jars of wine, neither of which they had ever seen before. They also found round wicker baskets, for holding fish, and strong cords of twisted grass, and many pottery jars and bowls. [267]



THE FIRST MUSIC

One of the men had taken the shell of a sea turtle, and stretched some thin strings of gut across it and he picked these strings with his fingers while singing his song.

They ate the bread cakes, and drank the wine, which made them very merry and gay. The old men, who later on were called bards, made a song in honour of Modor's victory, and one of them played the first music that man had ever heard. He had taken the shell of a sea turtle, and stretched some thin strings of gut across it and he picked these strings with his fingers while singing his song. Many hundreds of years later these bards, with their rude harps, wandered all through the country, from village to village, entertaining the people around the fires at night with songs of the mighty deeds of Modor and other great chiefs and leaders of the past. In those days, before people had learned to write, these bards were the ones who kept the history of the past, and even to-day we can find some of their songs and stories in the ancient sagas and legends of almost every people and country. Some of the deeds of these ancient heroes as told by the bards were so wonderful that the people came to look upon them as gods.

One of the young men in Modor's boat made a new discovery, while the battle was going on. When the attacking canoes came alongside, he sprang into one of them, followed by some of his companions, and fought the crew with his axe. A shower of sling stones from another canoe flew about him. To protect his face and head from the stones he snatched up the round wicker top of one of the fish baskets, and held it before him, so that the sling stones bounced off and did him no harm. This was the first shield.

Later on, when the battle was over, he took one of these round wicker tops, and stretched a piece of heavy leather over it. Then he fastened two leather thongs on the inside, so that he could slip his arm through them and so hold the shield before him while still having his hand free to grasp his bow.

Modor, who was a great chief, as well as a skilful carpenter, saw how useful this was at once. He sent a party up the coast to where he had seen the reeds growing, and had them bring back many bundles of them. With these he showed the women how to make frames of basket-work, and cover them with tough hide, so that each man had a shield to defend himself with.

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THE FIRST ARMOUR

Modor made wide gold bands and put them on each arm from the elbow to the shoulder, and these bands, originally ornaments, formed the first metal armour.

Another thing that came from this battle was the beginning of the use of armour. One of the sea folk had struck Modor a heavy blow across the arm, that would have cut it to the bone, had not the axe fallen upon the thick band of gold Modor wore on his arm. After this, Modor hunted for more of the gold, and when he found it, he made many more wide gold bands, and put them on each arm from the elbow to the shoulder, and this was the first use of metal armour. But it was a very long time before men came to use heavy armour of brass, and iron and steel.

Modor loved adventure, and he made up his mind to gather a fleet of ships, and cross the water to the land of the sea people, and attack them. But he did not live to do this. One day, while hunting in the marsh of the reeds, up the coast, a great beast like a rhinoceros, with long woolly hair, and sharp horns on its snout, charged down on him and his companions. They fought bravely, but Modor and two of his men were killed, and the rest fled to their boat, afraid.

The whole village mourned Modor with songs and cries of grief, and the next day a party went to the marsh and brought back his body. They buried it in a grave on the plateau, with great stones over it to mark the place. With his body they buried the dead chief's spear, and axe, and his gold armlets and shield, for these people believed that the dead would live again, and would need their weapons in the other world.

For hundreds and hundreds of years after this the island people lived in peace. The tribe grew very large, and spread far inland, where they found pleasant meadows, and forests, and banks of clay from which to make pottery. They built many stone villages and temples, and made armlets of gold, as Modor had done, and sewed plates of it to their belts, and ornamented the handles of their spears and knives with it. They also found tin, from which they made ornaments of a shining colour like silver, and copper, from which they made spear heads, and axes, beating them into shape with hammers of stone. With coloured clays, and the juices of plants, they stained their bodies in strange patterns, and coloured the shafts of their arrows and spears.

In the forests of the island were many wild animals, bears, great horned deer, and savage wolves, while along the rivers that flowed through the marshy country were huge beasts like the rhinoceros, and wild boar and snakes. From fighting these enemies they became fierce and brave, and when the bards sang of the men who came to attack them from over the sea, they would beat their weapons on

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the ground, with a loud noise, and talk of setting out to conquer them, as Modor had planned to do. But it was not until long after, when a chief named Mor came to be head of the tribe that they crossed the Great Water.

The twelve boats that escaped from the sea fight never reached home again. They had no compass to steer by, and the wind and tide drove them to a far-off shore, where no man had ever been. Here they settled, just as the island men had done before, and grew into a new tribe and people.

CHAPTER XX

THE SEA ROVERS

MOR and his men at last made up their minds to sail out across the Great Water and see what was on the other side. The island people were very strong and brave, and thought it much better to fight and have adventures, than to stay at home in peace all the time. So they made ready a fleet of twenty large boats, each one big enough to hold forty men, and one bright morning, with the wind blowing straight across the water, they raised their coloured sails, red, and blue, and yellow, and set out.

Each man carried with him a wicker shield, covered with tough hide, which he hung over the side of the boat within easy reach of where he sat at his oar. Many wore rings of gold and copper and tin about their arms. Their caps were made of leather, with the wings of birds in them, one on each side. They carried bows and arrows, long spears with points of polished flint, or copper, and stone axes and knives. Some of the chiefs had axes with heads of copper.

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They took water with them in great bottles made of the skins of animals, and plenty of smoked meat and fish. When they set sail, hundreds came down to the shore to see them off. Mor, a big strong man, almost a giant, waved his glittering copper axe in farewell, then turned his eyes toward the sea and led his little fleet out of the bay on its journey.

For a day and a night they sailed without seeing anything but a few birds. Some of the men, when they saw nothing but the ocean in every direction, as far as the eye could reach, were frightened and wanted to turn back, but Mor told them to wait, that they would soon reach land.

On the afternoon of the second day one of the men on watch gave a cry, and soon they saw stretching along the horizon a thin grey line of shore. A little later they could make out hills, and clumps of trees, and the smoke from a village.

It was evening and the people of the village were cooking supper about their fires. Mor led his boats into a little cove some distance away, and as soon as they grounded on the sand he and his men sprang ashore. Five men were left in each boat, to guard it, and the others, nearly seven hundred in all, with Mor at their head, went to attack the village.

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The village men had sprung for their bows and spears as soon as they saw Mor's ships nearing the land, and were now drawn up in front of the village, ready to defend it. The two sides rushed at each other, shouting fierce cries. A shower of arrows and stones met Mor and his men, but the tough hides of their shields kept them from being much hurt, and not many were lost. The village people, who did not have any shields, suffered very much, and many of them fell.

Their chief, a huge man as big as Mor, came out, carrying a heavy spear, and he and Mor began a terrible fight. The village chief aimed a heavy blow at Mor with his spear, but Mor caught it on his shield. When the sharp stone point of the spear cut through the shield it got caught in the wicker-work, and would not come out. Then Mor jerked his shield back and pulled the spear clear out of his enemy's hand. The village chief drew a knife, but Mor rushed at him and killed him with his copper axe.

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At this the village people were discouraged, and the men from the island set up a loud shout and rushing at them, killed many of them. The rest, seeing their leader killed, ran away. Then Mor and his men went into the village and captured the women, and took great stores of grain, and wine, and furs back to the ships. After that they set the village on fire.

By this time the village people had secured help, and were coming back to renew the fight, so Mor called his men together, and guided by the light from the blazing huts of the village, they pushed their boats off the sand, sprang aboard, and rowed swiftly away. In a little while they had vanished in the darkness.

When they got back home, Mor and his men had a feast, and all the people thought him a hero. After that, he made many voyages, and so did others of the island chiefs, and the people of the mainland were afraid of them.

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These rovers of the sea were no more than pirates, of course, but they did a great deal of good. Year after year they would descend on the people of the coast, burning and robbing, carrying off their women and animals and taking them back to their island home, but sometimes they could not get back, but were driven by storms to other lands, where they settled and built new homes, taking with them all that they had learned about metals, about building boats, and many other things. In this way the knowledge they had gained was spread to other peoples. Sometimes they would land in peace and trade with the people on the mainland, giving them gold and copper and tin in exchange for grain and cattle and pottery. They sailed great distances in their stout ships and not only learned the things that other races knew, but at the same time brought to these other peoples their own knowledge of metal working, and carpentry, and the building of boats. Thus, through these sea rovers, the different arts spread from tribe to tribe, and from people to people, which was what Mother Nature intended.

When man discovered metals, and how to use them, the Stone Age began to draw to a close. There was of course no exact time when the use of stone stopped, and the use of metals began, for in some parts of the world men were using metals for hundreds and even thousands of years, while others, in other countries were still using stone. When Columbus came to America, only a few hundred years ago, the Indians in North America knew nothing of tools or weapons of metal, they were still living in the Stone Age.

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Another discovery which came about the same time as the use of metals was the art of making glass. Just when men began to use glass we do not of course know, but in some of the most ancient tombs, along with weapons of copper, and ornaments of gold, we find beads and other small objects made of glass.

How it came to be discovered is another thing we do not know, or by what race. It is very likely that it was made by many different peoples, at different times in the world's history. Over and over we find that some race which had gone far along the road to civilisation, would be swept away by savage tribes and its discoveries lost for many centuries. We know this, because sometimes we find, when digging in the earth, the remains of savage peoples, with thick skulls and rude weapons, and under these are the skulls and polished weapons and ornaments of a much more highly civilised race. The road which man followed in his progress toward the civilisation we have to-day did not run smoothly upward, like a path up a hill, but dipped up and down and around in many circles, always rising a little higher, however, as the ages went by.

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It is thought that the sea people first discovered glass. Ordinary glass is made of lime, soda-ash and sand, three very common substances. Because sand is the thing most needed in making glass, we think it must have been discovered by a people living on the seashore. It must have been first made by accident, because man could not have set out to discover something he did not know anything about.

The most common story about the first glass is that it was made by some sailors belonging to the Phœnicians, one of the early sea-going tribes living on the shores of the Mediterranean Sea. It is supposed that these sailors, building a fire on the seashore to cook food, may have propped their pots up on pieces of limestone, which furnished the lime, just as the beach furnished the sand, and the fire, the ash and the heat. Probably they found in the ashes of their fire a hard, greenish lump of glass. They did not know what it was, of course, but carried it away because it was clear and bright and pretty in colour, like a jewel. Wiser men, hearing their story, may have learned in this way how to mix sand, lime and soda-ash together and by heating it form glass.

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The earliest things made of glass were coarse beads, and little bottles and vases. Later on, man came to make very beautiful glass vases and bowls and drinking cups, such as those found in ancient tombs in Egypt, and in the ruins at Troy, and on the Island of Cyprus. These cups and bowls and other objects are tinted the most wonderful colours, blue and green and gold, like the feathers of a peacock. It is said that the ancient Egyptians knew how to make glass that would not break, so that a vase, dropped to the floor, instead of being shattered to pieces, would be only bent out of shape. This secret, like the way the Egyptians had of hardening and tempering copper, has been lost, and the most skilful glass makers

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to-day could not make glass like that.

CHAPTER XXI

THE END OF THE STONE AGE

DURING all these long centuries, many, many thousands of years, the people from the valley where Adh and his wife first lived had been spreading far out over the surface of the earth. Many boats and canoes, carried by storms from the country of the sea people, were driven to other countries, and all around the shores of the sea new tribes were springing up. Century after century, as these tribes became larger, and game grew scarce, new bands of adventurers wandered off into the wilderness inland, and from the tribes they formed still other bands wandered away. Some crossed great lakes and seas in boats, others drifted down mighty rivers for hundreds, and even thousands, of miles, on rafts. Mountain ranges were crossed to find new hunting grounds, and new tribes were formed, which in their turn sent out other bands of adventurers. During all this time the face of the earth was changing. Great glaciers from the frozen north crept southward century after century, grinding the surface of the rocks like giant ploughs. Earthquakes and floods caused new continents to rise where before there had been only seas, or made seas, in places where there had been dry land. Mother Nature's new race of men had to fight the heat and the cold, the storms and the sea, as well as the fierce animals which were always ready to attack them, but in spite of all these things, they spread and grew, year after year, until the earth began to be covered with them.

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They did wonderful things with their tools of stone. Remains of their work are found in many places, tens of thousands of years old. On the Island of Malta, in the Mediterranean Sea, there has been found an underground temple of great size, with many arched and vaulted rooms, beautifully carved, all of which were cut out of the solid rock with axes and chisels of flint. In other places wonderful temples, tombs and buildings of various sorts have been discovered, built of great cut stones, and we wonder how such huge rocks could ever have been squared and polished so beautifully with nothing but tools of stone.

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STONEHENGE

The ancient ruins in Wiltshire, England. Below, a diagram showing their original construction.

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Mother Nature had been away for quite a long time now, for she did not have to bother so much about her children as she had at first. In every direction she saw them following her great laws, conquering the winds, the sea, the rivers, the mountains, the plains, using the woods of the forest, the fruits and grains of the fields, the metals, the clay and the rocks to suit their needs. North and South and East and West they spread out, increasing year after year in accordance with God's great laws.

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When Mother Nature came back she looked at the Sun and

smiled.

"They have made a good beginning," she said.

"Is that only a beginning?" asked the Sun.

"Yes. So far they have hardly done anything at all. But they are on the right track. With every thousand years that go by they will learn a little more, and some day, far in the future, they will begin to be really civilised. That time will come when they have conquered everything else in the world, and begin to conquer themselves."

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"Why is it," asked the Sun, "that some of them, like the ones on the island, are going ahead so fast, while others are still just savages?"

"It is because of the climate, and the kind of country they live in. Look at those savages down there in the hot jungle. All they have to do is stretch out their hands and pick some nice juicy fruit. There is always plenty for them to eat, and it is so warm all the time they don't need any clothes, or houses to live in, but can sleep in the trees, or in little bamboo huts. They will never learn to grow things, or to hunt animals to eat. Life is so easy for them that they will keep right on being savages for thousands of years."

"They are getting brown and black," said the Sun. "Why is that?"

"It is because they do not wear any clothes, and the hot rays you are shining down on them are turning their skins darker. Just look at those people up there in the north, where your rays are not so hot. They are getting lighter and lighter all the time, their hair is getting yellow and their eyes blue. They are stronger and quicker, too, and they know much more. In their cold country there is no food ready to be eaten all the year round. They have to fight very hard for a living, and this has made them strong and brave and cunning."

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"It is very wonderful," said the Sun.

"Look at those people by the seashore," Mother Nature went on. "See what splendid fishermen and sailors they are getting to be. And those strong hunters, who live in the mountains, and those farmers, beginning to raise grain and other things for food. Each tribe is learning different things, depending on its surroundings. Soon those tribes on the plains will have great herds of buffalo, and sheep and other animals, and later on they will teach them to work, and to carry them on their backs, and pull heavy loads. They will use their milk for food, too, and the wool and hair from their backs they will weave into warm, strong cloth from which to make clothing. After a while you will see these tribes wandering thousands of miles with their flocks and herds, going north in summer and south in winter to find fresh grass for their animals. The people will live in tents, and ride horses and camels, and they will be called nomads."

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"How are they going to catch these animals?" asked the Sun.

"Some they will capture while very young. For others they will make traps by digging pits in the ground and covering them over with thin rushes and grass. The animals will walk on the rushes, thinking they are on solid ground, and so fall into the pits, and be caught."

"These different peoples don't like each other," the Sun said. "They fight whenever they meet."

"Yes," Mother Nature told him, with a sigh. "The tribes that are strongest and know the most must overcome those that are weak and lazy and ignorant. It may seem to you a cruel law, but it is a wise one, or God would never have made it. He wants His people to grow stronger and wiser and better all the time, and so you can see that He has to let the ones that are wiser and stronger go ahead, or the race would not make any progress at all. It would never do to have those splendid island people destroyed by those lazy savages in the jungles. For a long time Man will have to live by the law of force. It cannot be helped. But some day, as I have already told you, he will throw this law aside, and live by the law of love. It will take a long time, Sun, but it will come. Meanwhile, watch my little people carefully and you will see many more wonderful things."

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