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Bronson, Wilfrid S.

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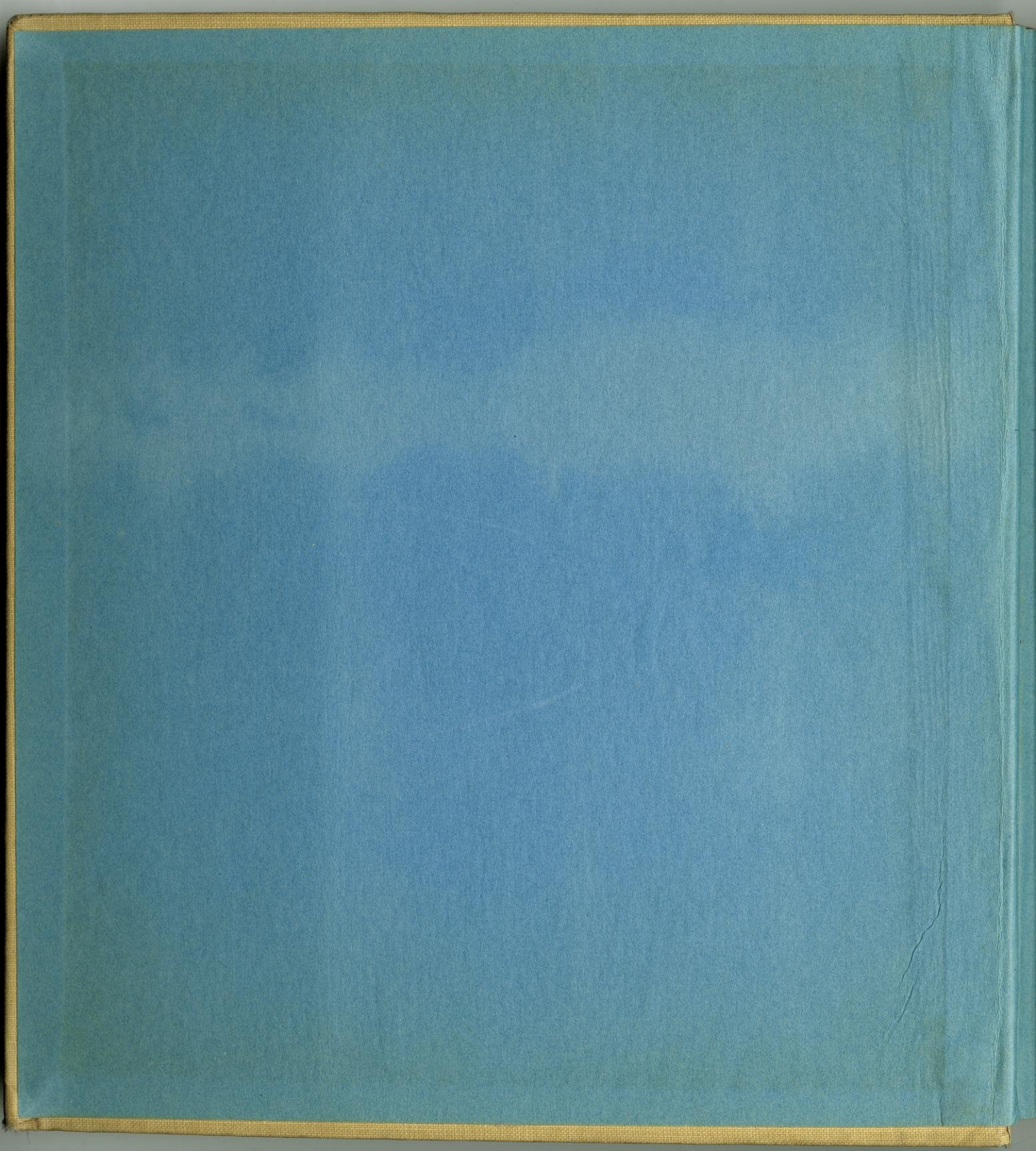
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PADDLEWINGS



W. S. BRONSON





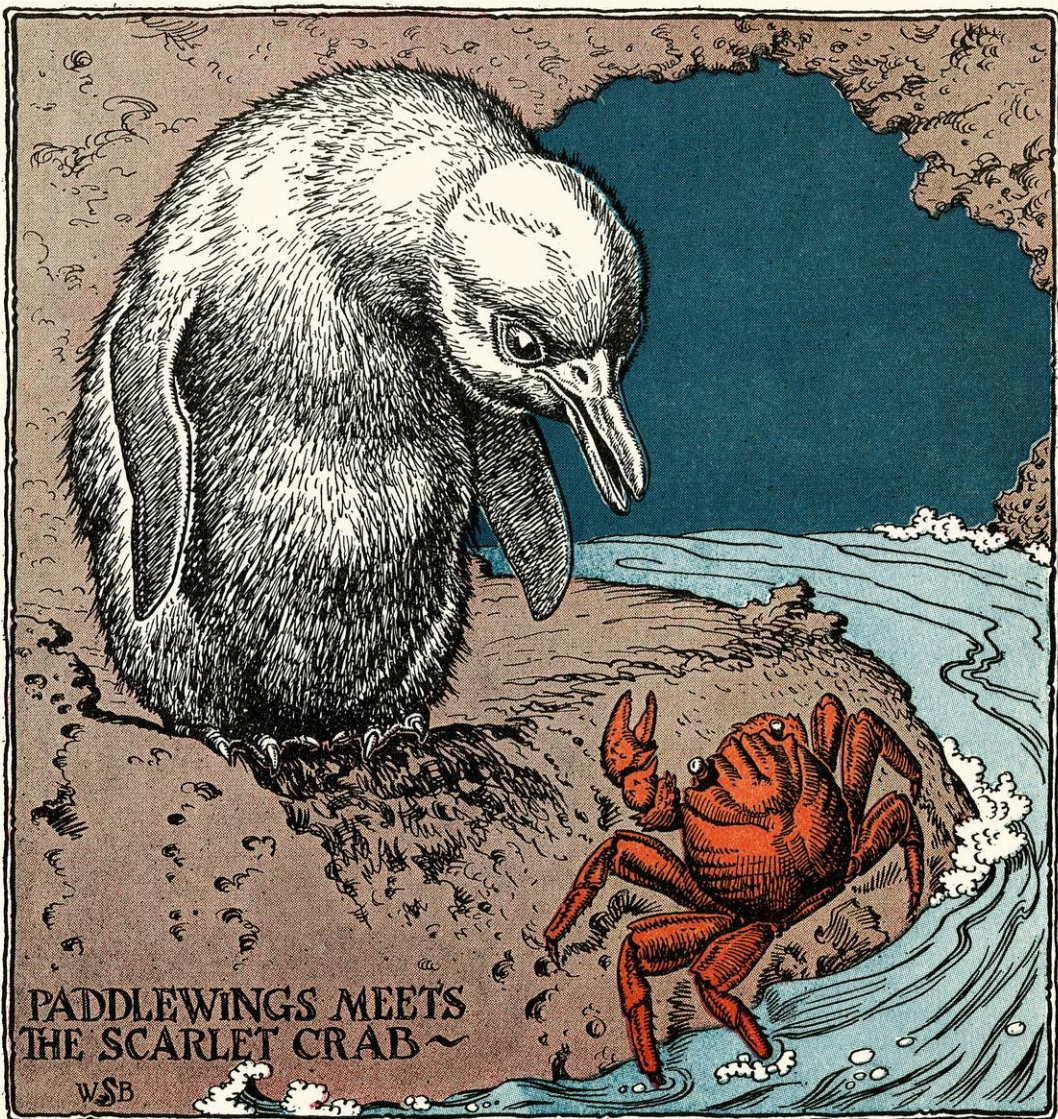
PADDLEWINGS
The Penguin of Galápagos



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PADDEWINGS MEETS
THE SCARLET CRAB ~

WSB

PADDLEWINGS
The Penguin of Galápagos

by
WILFRID S. BRONSON

Pictures by the Author

NEW YORK
THE MACMILLAN COMPANY

1931

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Allow me to introduce~
PADDLEWINGS
THE PENGUIN
of
GALAPAGOS



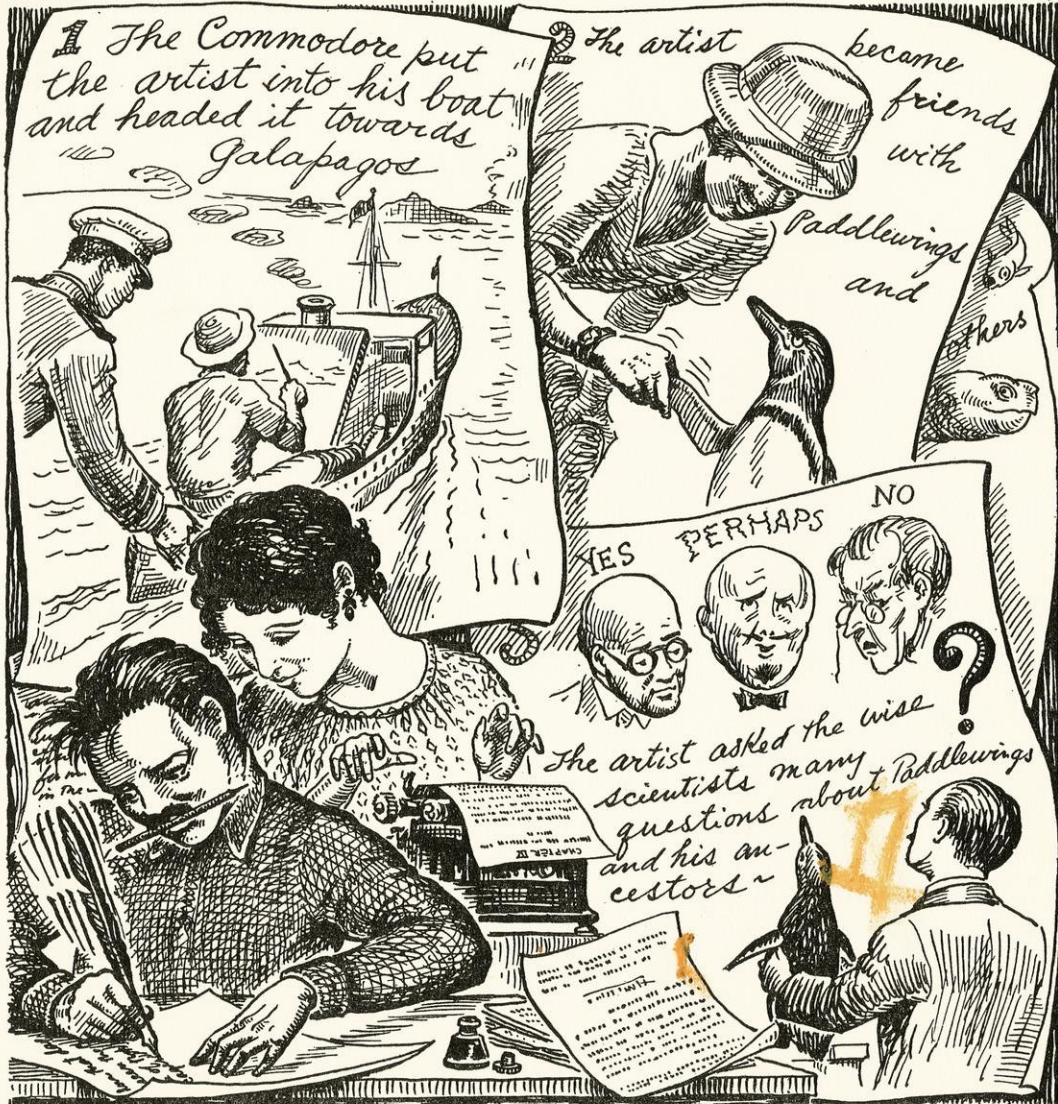
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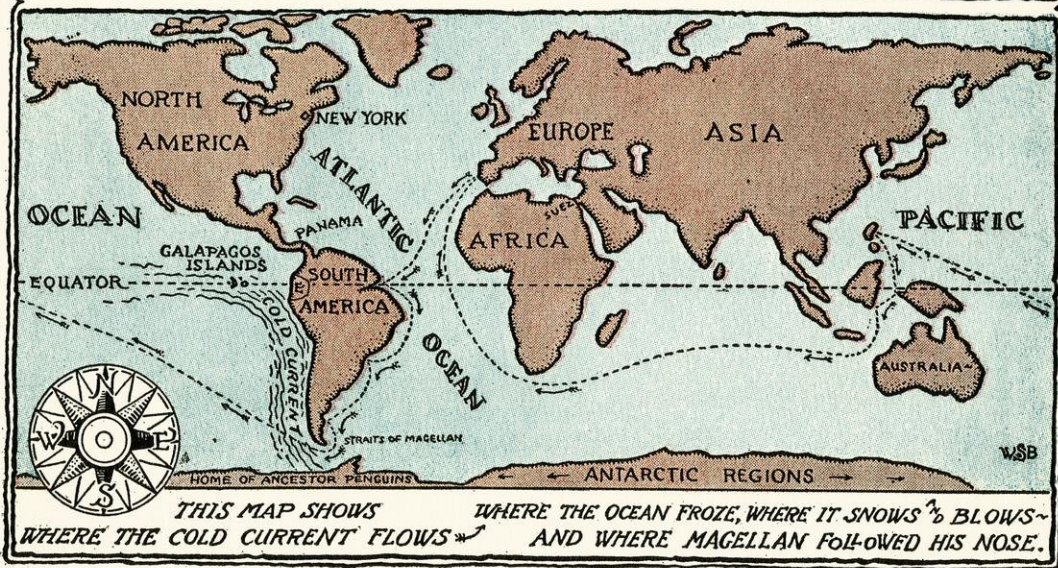
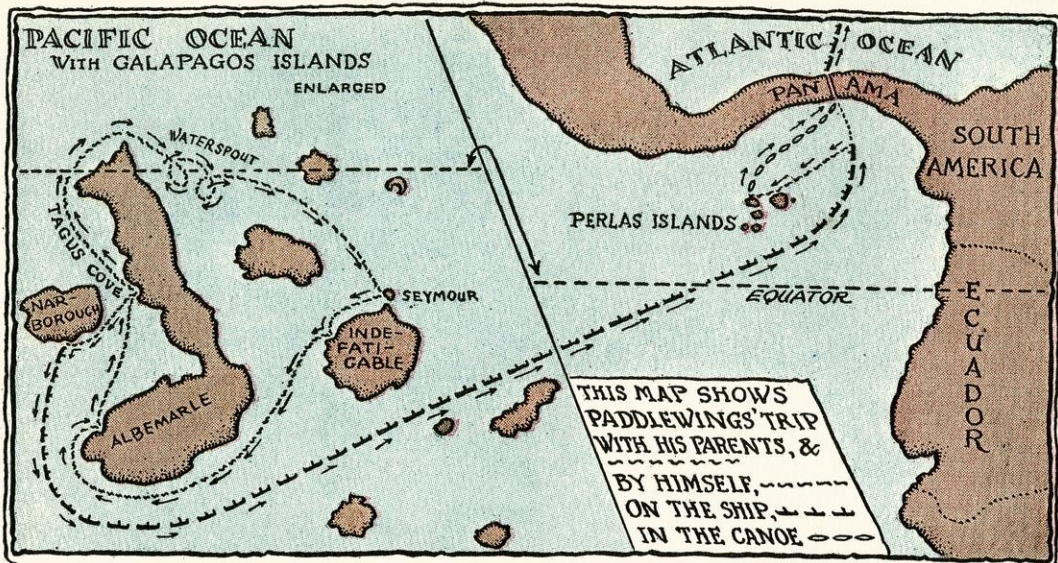
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HOW THIS BOOK ABOUT PADDLEWINGS WAS MADE~



Then he drew all the pictures & wrote the words. His good wife whacked them out on a typewriter & you can see who else did what, on the opposite page ~



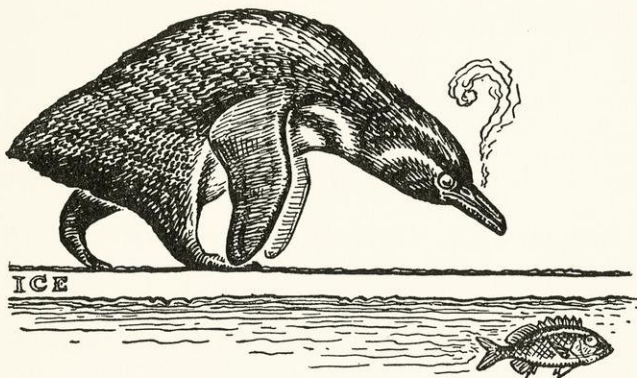
PADDLEWINGS

Chapter I

HOW THE PENGUINS GOT THEIR PADDLES AND CAME NORTH FROM THE SOUTH POLE

WE ARE apt to think of penguins as belonging near icebergs, in the cold places at the bottom of the world near the South Pole. This book is about a penguin who lived on some islands in the Pacific Ocean, as far as possible from both the South Pole and the North Pole. Since these islands are farthest from the two coldest places on earth, they are in the hottest place, right on the Equator. If you look at the map of South America you will see a little country called Ecuador, which means equator in our language. If you follow the Equator right through Ecuador, and keep on into the Pacific Ocean, you will come to the Galápagos Islands. They are six hundred miles away to the west of Ecuador, and that is where the penguin, Paddlewings, was hatched one fine day, not long ago.

Many thousands of years ago, Paddlewings' ancestors did live down near the South Pole. A great deal had to happen before the first penguins came to live where Paddlewings came pipping out of his shell.



It took his ancestors a very long time to come from far down in the Antarctic regions. They had to get used to warmer weather very slowly, so they came a little way at a time. Only a few ever came as

far as the Galápagos Islands. The others stopped wherever they thought there was a good place to lay eggs and raise young ones. This made many little penguin towns along the shores of South America. Back in the Antarctic there are whole penguin nations, while on the Galápagos Islands are just a few families.

The penguins who live in the Antarctic swim many hundreds of miles north every year as soon as their young ones are old enough to go with them, because in that region there is only a short time when the weather is warm enough for them to raise their families. Then they start swimming north before the ocean freezes over. Penguins have to swim under water to catch fish and other things for a living, and if the ocean is all covered with ice, how are they going to get into it? So they keep going

till they reach a place where it never freezes solid, where the salt in the sea melts the ice as fast as it forms.

Have you ever seen a man throwing salt on the icy sidewalks in winter? He is melting the fresh-water ice by making it salty. There is more fresh water in the sea near the South Pole than there is hundreds of miles farther north. You may think hundreds of miles is a long way to swim, and it is. But you know how the robins and other birds fly all the way from New York to Florida and back each year, to keep out of cold weather. That is called migrating. The penguins can't migrate in the air like most birds because they have no feathers on their wings, but they can migrate in the water because their wings are very much like a pair of oars or paddles. When they hold them in the water and make flying motions they move forward much faster than anyone can row a boat. I will tell you how they came to use their wings this way.

When birds or animals who are not used to swimming get into water, they try to go ahead by moving their wings or legs the same way they do in the air or on land. Sometimes this works well and they find they can swim. Dogs and cats try to trot in the water and although it is slow work, they can get there just the same. Our house cats don't like the

water, but tigers and jaguars live near rivers and seem to enjoy a swim. Of course, some creatures have a bad time in water when they try to run as on the land. Jack rabbits do. Every time they kick with their great hind legs it pushes their noses under.

You know how hard it is to run in water that is up to your waist. You can find a better way to move forward in deep water by lying on your belly and doing the crawl stroke. Did you know that many tiny babies can swim, because they try to crawl in the water? If people never learned to walk, but always crawled, probably almost everyone would be able to swim without having to learn. When you learn to walk you forget how to swim because you forget all about crawling. But when you try to crawl in water your arms and legs cannot move in just the same way as they would on the floor. You have to change the motions a little. When you do this you swim better.

That is just what happened to the penguins. Probably millions of years ago their great grand ancestors could fly like most sea birds. Sea birds eat fish and shrimps and such things, and often they have to fly many miles, looking for schools of fishes near the surface of the sea which they swoop down upon. Some of the ancestor birds just flew

down to snatch the fishes near the surface of the water, holding up their wings to keep them dry. Other kinds dived right in to catch the fishes deeper down. They would dive and try to take the fishes by surprise, returning to the top of the water right away. If the fishes escaped, these birds would bob up to the surface of the water, fly about thirty feet in the air and make another dive and snatch. But after a while some of them learned how to save themselves so much hard work. They discovered that by flapping their wings they could fly under water and chase the fish they missed in diving. And just as you had to change from walking in waist-high water to crawling in order to get along better, the sea bird learned, instead of giving a flap of his wings under water, to just give a flip.

Then something happened which made them forget how to flap their wings in the air for flying, and only remember how to flip them for swimming. Fishes and shrimps grew in such large schools that the great grand ancestors of penguins never had to fly in search of food, but just dived off the rocks into the sea and with a few flips got plenty to eat. So after thousands of years, this bird who kept flying less by flapping, and kept swimming more by flipping, had less and less use for

feathers on his wings, until nowadays penguins have no real wing feathers at all. Instead, their wings are flippers, more like little black oars or paddles. By flipping such wings under water they swim better than many fishes. If they are not chasing their next meal, they swim at the surface with their heads out, but not like a duck who pushes with his feet, and keeps his wings folded on his back. Their heads are up but their wings are still down in the water, and it is in this way that they migrate hundreds of miles north in cold weather, and south again when it is not so cold.

Once, ages ago, the cold weather must have been extra bad, so that the penguins had to migrate much farther to find good places to stay. They came to the rocky shores of South America, somewhere near the part called Cape Horn. This seemed to some a good place to live, because when warmer weather came again they didn't swim back. They stayed right where they were to lay their eggs and raise their young ones. Once in a while, out of the millions of birds that grow up year after year, there is one who wants to do things differently from the way all his family do. He wants to experiment. It's that way with all creatures, people too. If the experiment turns out well, as when the diving bird tried

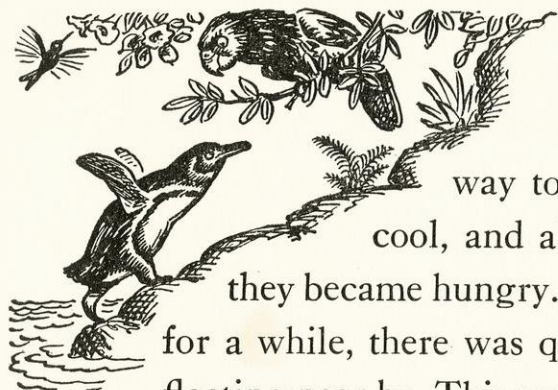
flipping under the water to chase the fishes; if it helps the one that tries it, he will live and be strong and raise lots of young ones. They will be quite likely to learn to do things the way he does them. If it is an unwise experiment, it does the one who tries it harm. Suppose a penguin decided to stay down near the South Pole after the babies had all grown up and all the birds were migrating north to warmer places. He would freeze to death. If he didn't freeze, he would starve anyhow because the ocean would freeze, and he couldn't get into it to swim after his food. So he wouldn't live and be strong nor raise up any young ones to do as he did.

But those penguins who stayed up north to breed found that it worked all right, and so they never went south any more. Their children began to explore, and year after year they went along the west coast of South America, finding places further north to raise their own children. If the weather seemed a little too warm for birds whose grandparents lived near the South Pole, they only had to get into the water which was still quite cold. That was because a sort of steady stream of cold water kept running north along the shore from way down where the icebergs were in the Antarctic. This cold water is still coming

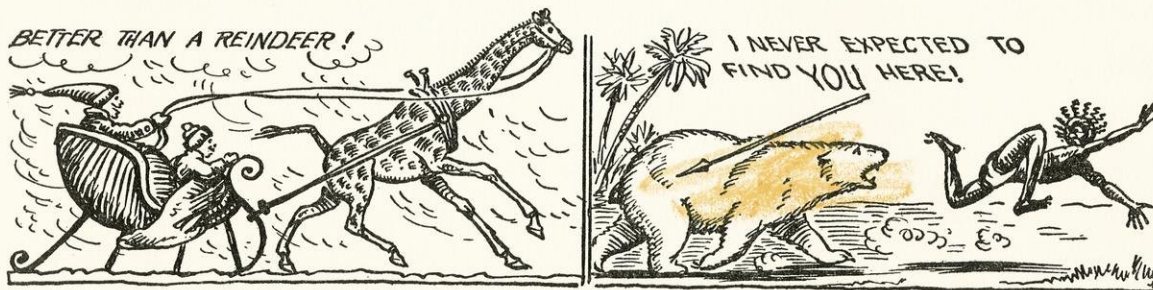
steadily up, bringing with it all the kinds of sea food that penguins have always liked best. When it reaches Ecuador it turns away from South America and flows out to the Galápagos Islands. After hundreds of years, some more wandering, experimenting penguins traveled to those islands, and all the way the cool water gave them comfort from the hot tropical sun, and furnished plenty of their favorite food.

The penguins who went as far as the Islands were not many. Their first cousins stopped to settle down when they came to the coast of Chile, in South America, where the thick jungle grows right down to the seaside. Here is a queer sight for people who always think of penguins near the South Pole. For you can see the penguins nesting in the tangle of jungle that grows over the seaside rocks, while all about them in the trees are parrots and humming birds doing likewise. These penguins have made pathways up the slopes into the cool jungle shade, and when they are through swimming, they run up into the forest to keep out of the glaring sunlight.

It seems an odd place to find them, almost as odd as it would be to find Polar bears in the middle of Africa, or giraffes in Lapland. But there the penguins are, and from Chile it was not such a hard trip to the



Galápagos Islands. The few who tried it would not have gone if the cold current of water did not go that way too. It carried them along, kept them cool, and all about were fishes to eat whenever they became hungry. If they wished to get out of the water for a while, there was quite likely to be a big log or dead tree floating near-by. This was because when storms raged over the jungles on the shores of South America, the heavy rains filled the rivers and made floods. All this water, rushing down steep mountain sides, could tear away almost anything in its path, and bear it along. When all these plants and trees reached the ocean, they would float out into the cold current and be carried off to the Islands, six hundred miles to the west.



Chapter II

HOW SOME ISLANDS CAME TO BE, AND WHO CAME TO LIVE ON THEM

WE OUGHT to talk about the Galápagos Islands before we get to talking about the penguins themselves. If we were getting ready to do a play, first of all the theater would have to be built and the stage made ready. Nature built our theater, millions of years ago. The ocean around the Islands is two miles deep, so that Nature had to use a lot of energy and strength to build up a rock foundation for the stage. She did this with many volcanos.

Think of the world as if it were an old automobile tire, and think of a volcano as the place where an enormous blow-out comes. A blow-out of a tire makes trouble for the man who owns the auto, but a volcano is a blow-out of the very world itself. Suppose a car with old worn tires is parked in a hot sunny street for a long time. As the sun shines on the poor old tires, the air inside them gets warm and then hot. The hotter it gets the more room it needs, but there is no way for it to escape. A strong new tire can hold the air even when it gets heated, but if there

is a weak place, after a while you will hear a sudden loud noise. The air has burst its way through the weak spot and there is a blow-out.

Inside the earth there is so much heat that all the rocks and iron down there are melted. After a while, just as in the old tire, there is not enough room for it all. So it bursts its way up through some weak place in the land, and there is a giant blow-out, like that of Mount Vesuvius in Italy, or Fujiyama in Japan.

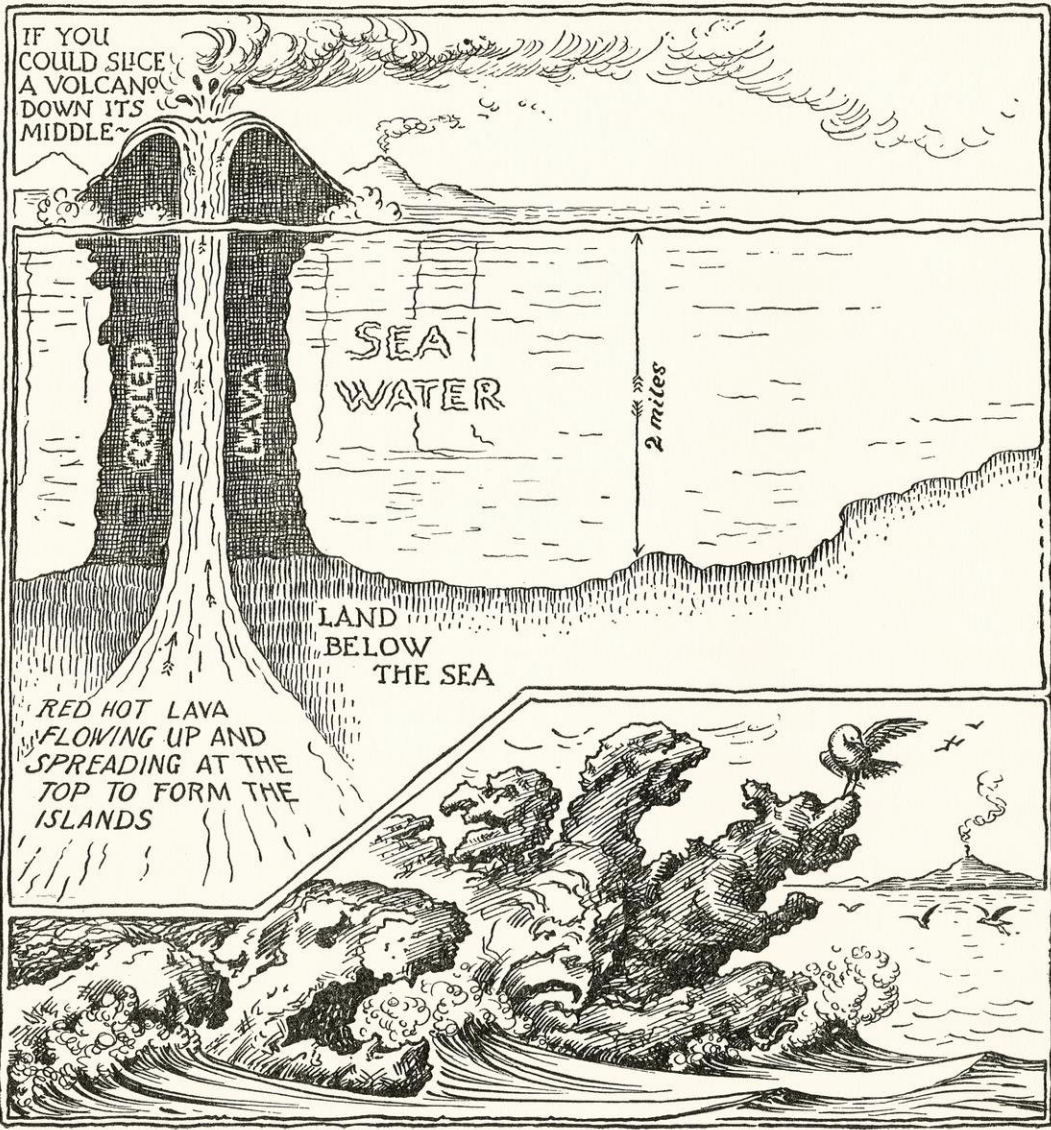
The land at the bottom of the sea must have been very weak in many spots right below where the Galápagos Islands are, because some very big volcanos blew out there. They burst out everywhere for miles. Hot melted rock, called lava, came pouring up through all the weak places, flowing out in all directions and boiling the sea all around. But it couldn't boil the whole ocean so it kept cooling off and hardening, the way hot boiling taffy candy hardens when you put it into cold water. As fast as the lava cooled and hardened, more came gurgling up through all the volcanos' blowholes. They were all boiling over in the middle and cooling on the edges. The hardening lava piled higher and higher all around the rims of the holes until they looked more and more like giant pillars of rock.

The volcanos grew taller until they were two miles high and reached from the bottom of the sea to the surface. Then smoke and steam began to rise in great clouds, and the lava kept on pouring out, running down in all directions from the middle of each volcano. It spread wider and wider and higher all the time, and when it finally stopped pouring out a dozen good-sized rocky islands and many smaller ones had been formed. Some of them were terrible looking because when the lava stopped running and turned hard it took all kinds of shapes, like strange men and beasts suddenly frozen stiff while rushing downhill.

That is how Nature built the theater so long ago. It was not yet ready for the penguins and other creatures who were to be the actors. Now Nature had to make the scenery and set the stage. First big storms battered the new islands for many years, with terrific waves. They broke off chunks of rock and washed them up and down. The broken pieces scraped on the other rocks and gradually broke into smaller and smaller bits till they became small grains of sand. Beaches were made that way in some places.

Some sand got carried up in the great waves and dropped into cracks and holes in the rocks high up on the islands. A few little fishes were

IF YOU
COULD SLICE
A VOLCANO
DOWN ITS
MIDDLE~



SEA
WATER

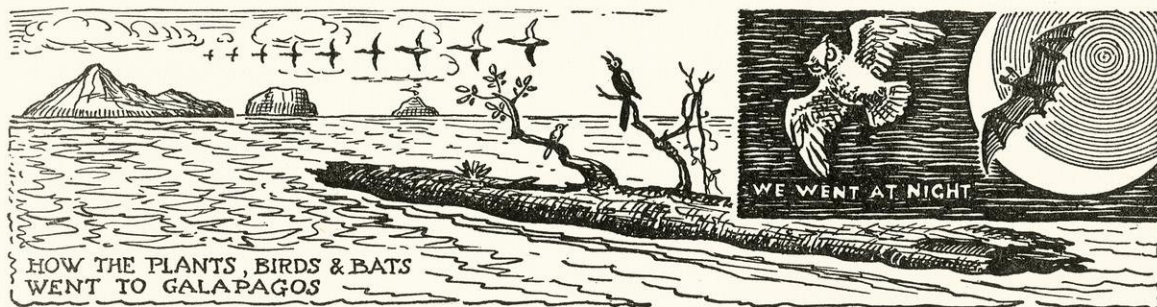
2 miles

LAND
BELOW
THE SEA

RED HOT LAVA
FLOWING UP AND
SPREADING AT THE
TOP TO FORM THE
ISLANDS

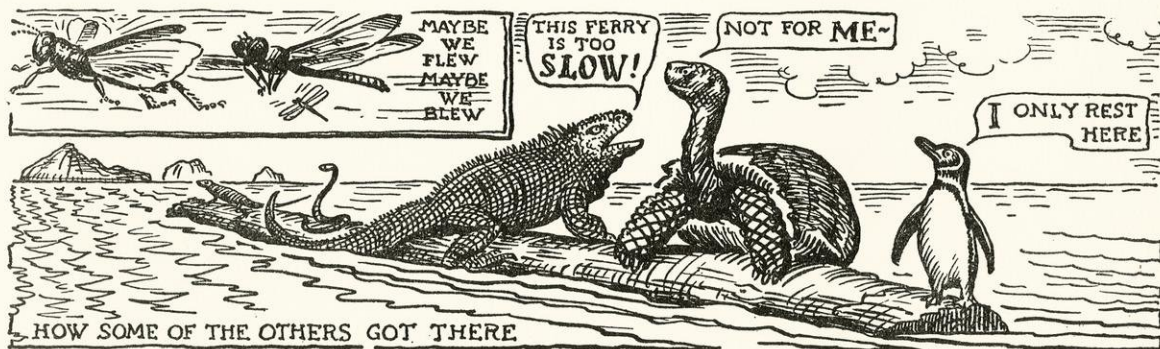
also tossed up there, and of course they died. Here was a place all fixed up for a plant some day to grow. Do you know that dead fishes are very good to make things grow? They are full of phosphate, which is good food for plants. Our Red Indians used to plant two grains of corn with one dead fish and the corn grew well, getting strength from the fish's dead body. Then, as we said before, the rivers in South America brought down all sorts of things. Some of the dead trees washed upon the Islands after floating six hundred miles. They rotted there till they crumbled into the cracks and made more places for plants to grow. Little vines and seeds sticking to old half-rotten logs may have kept alive on the long drifting ride, and so they were all ready to grow and bloom and sow their own seeds in holes and cracks. As the plants grew and died they rotted and provided food for new plants which, after a great while, covered the Islands in many parts with green.

The stage was set at last. Now for the actors. Some insects were blown there; small bats, a few land birds and many sea birds flew there; but most of the actors drifted out from South America after storms, clinging to trees and other floating things. Big bright grasshoppers, dragon flies and giant centipedes, and little snakes and lizards must have come



there that way. So did the very large lizards called iguanas. There are big tortoises who were also ferried across on fallen trees. And of course there are the pioneer penguins. All these different kinds of creatures have been there for thousands of years.

Other creatures came to the Islands, but not so long ago. Men have sailed there only in the last three hundred years. Sometimes they were





shipwrecked there, with their pet dogs and cats. Sometimes they brought cows and goats and pigs and turned them loose to run wild and increase. They hoped that when they came back some other time there would be many more animals, which they could hunt for fresh meat. It took ships a



long time to get anywhere in those days and their supply of good food often ran low. Rats must have gone ashore from some of the ships, because there are rats there to-day. These men and the animals who came with them made much trouble for the animals who had been there for thousands of years. The cats had to make a living, so they killed many birds. The dogs ate young tortoises. The pigs dug up tortoise eggs and ate them. And the men took away millions of grown-up tortoises to eat aboard ship on their long voyages.

First the Spanish explorers came. Then came Englishmen and pirates. They fought each other, and some of the pirates' gold is said to be hidden there to this very day. After that, whaling ships began to come from England and America. All these ships were full of hungry men, and in three hundred years they took away millions of tortoises. Their tame animals ran free and bothered the wild animals who were quite tame. Scientists have been going there to collect animals for museums and zoos and they found that the birds, reptiles, sea lions and penguins were very easy to catch. They did not seem to be very much afraid of people, but the dogs, cats, pigs, cows and goats all ran away whenever anybody came near.

Chapter III

HOW PADDLEWINGS GREW INSIDE THE EGG

I HAVEN'T forgotten that this book is about penguins. But first I wanted you to know about the Islands and the creatures who came upon the stage of these Islands, just as you would read a list of actors in the theater before the play begins.

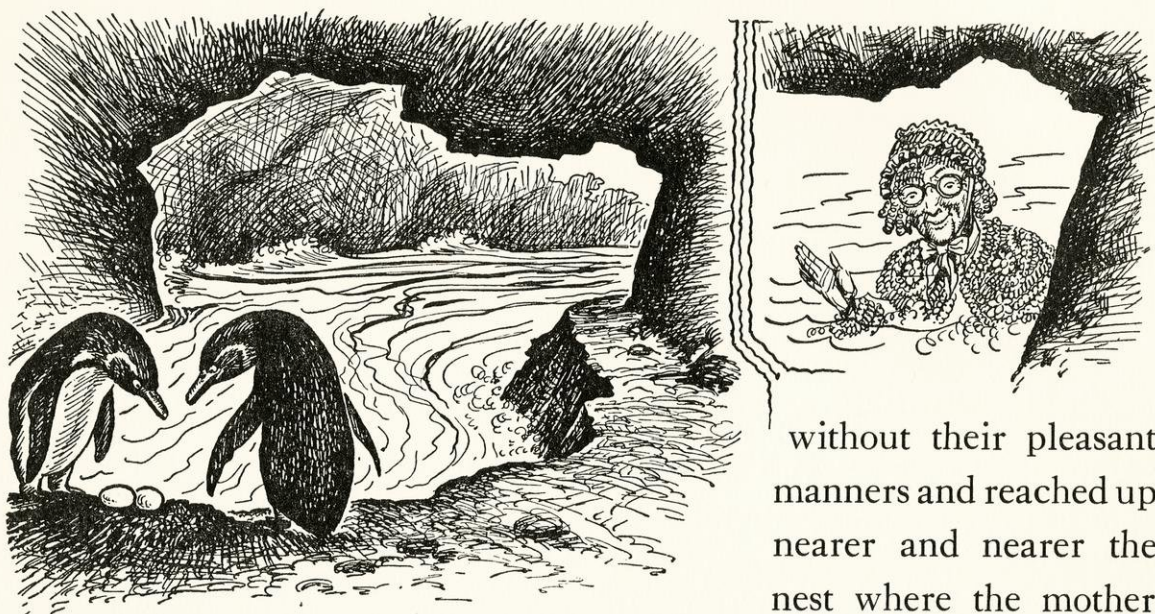
The story of our special penguins begins among the seaside rocks of the island marked Narborough, at a place called Tagus Cove. There, in a cave by the sea where the waves roll in with a din, a penguin mother laid two eggs.

The father penguin was about as glad and excited as the mother. The mother bird was pretty wise to choose a cool cave in which to lay them, for there was a lot of work to be done. They would have to take turns sitting on them for about a month, and it was a good thing they wouldn't have to sit right out in the scorching hot sun. They had not changed much from the penguins who first came exploring up from the cold Antarctic. They still preferred to keep as cool as they could, and there is more sun than they need in this hot part of the world.

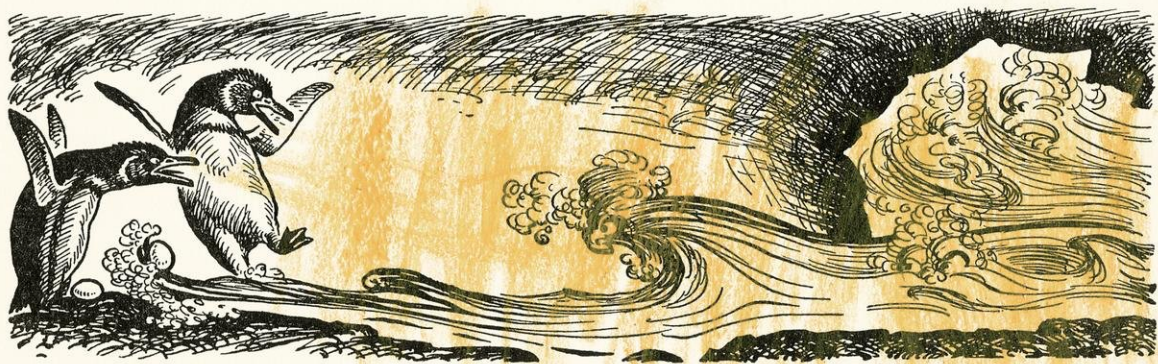
Sea birds as a rule are very bad nest builders. They spend a lot of time stealing bits of material from each other. The penguins in the Antarctic use pebbles to make a little mound with a hollow place on top to hold the eggs. Probably this Galápagos mother bird walked into the cave and sat down to enjoy the coolness and dim light. Then the father came in bringing a pebble and set it down in front of her. He would keep bringing in bits of stones and maybe sticks, and she would sit right there, placing them all about her till enough had been gathered to make a safe place for the eggs. Or she may have merely found a bowl-shaped spot in the cave and called that the nest.

Anyhow, here were the eggs and here was the month-long job of sitting on them. It was pleasant for the mother penguin to sit there in the cave, watching the sea roll in at the door while the father was out having a swim. As the waves washed in and out they made a splashy noise which echoed loudly on the walls of the cave. Each wave with its frill of foam was like a kind old lady in a lace cap looking in at the door to ask how the babies were getting along.

But one day the waves acted very differently, for there was a storm outside. It drove them into the cave with fury. They came roaring in



without their pleasant manners and reached up nearer and nearer the nest where the mother penguin sat. These waves were more like hungry savages than sweet old



ladies. The father penguin didn't go out for a swim but sat close by, watching the angry water till it came his turn to sit on the eggs. It would have been better if the mother had stayed right on the nest while the storm was raging, for a terrible thing happened when she got ready to change places with the father. As she stood up, and before he could cover the eggs, a wave much bigger and angrier than the rest rushed over the nest and washed one egg away. The mother bird went racing after it but before she could get near enough to take it in her bill another wicked wave crashed in at the door. It tossed the kidnaped egg up against the rocky walls and smashed it to smithereens.

That was a pretty sad day for those two birds. The father sat on the one remaining egg and the mother sat near-by, and they were most unhappy. There was nothing they could do about it except be very careful of their only egg, and of course they were. All the time they sat upon it something very wonderful was happening inside. If you could have seen what was going on in there you would have been reading the family history of all the penguins. It was as though nature went clear back to the very beginning of all animals and told the story inside the eggshell of how animals came to live in the world, or what happened in the world

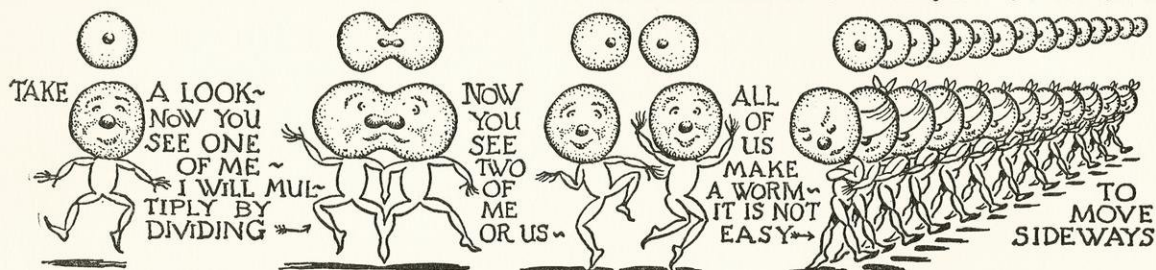
before there were any penguins anywhere. In that egg at first you would have seen just the white part, the yellow yolk and a tiny speck. The speck was the beginning of Paddlewings. Something you could not have seen was in there also. It was a little spirit that had only one wish, one reason to be there, to live and grow and learn to live some more. So while the mother or father bird kept the egg warm the little spirit began to grow, and it kept changing the looks of things inside the shell.

If you could have watched you would have been reading the story of all the changes Paddlewings' ancestors made before him. For his first ancestor was like the yolk of a new-laid egg, only not yellow, but like jelly and very small. There are still animals in the sea like that. The only way they can eat is by surrounding some bit of food too small for us to see, with their jelly-bodies. The only way this tiny ancestor could change was by dividing himself in two. This made two such ancestors, and probably for millions of years the only animals in the sea were these little egg-like creatures who could make more bodies like themselves by dividing and floating away. Then, after a long time, one of them divided, but the two parts did not leave each other. This made a new kind of animal who had two parts which grew instead of one. Slowly it came

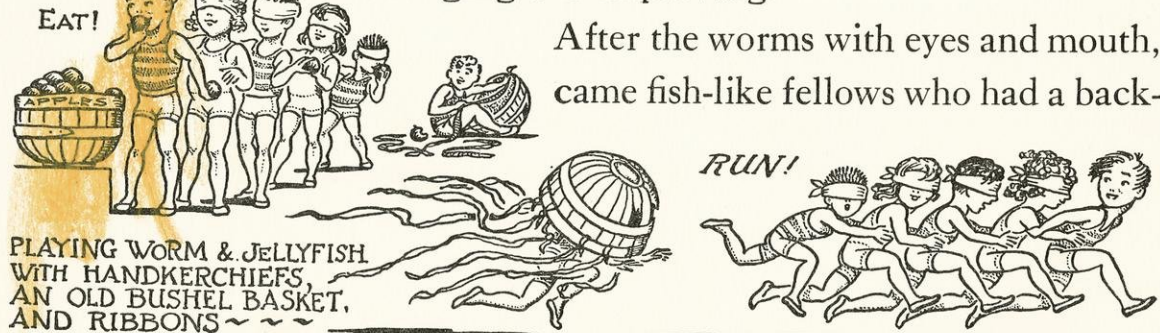
to be that more of these parts grew and divided and stayed together until finally there were small jelly-like animals made of quite a number of these parts. We had better call the parts "cells" for that is their right name. Some jelly-animals grew into fancy shapes like the jelly-fishes in the sea to-day, and because of their better shapes they somehow learned to swim a little instead of merely floating.

The kind of jelly-animal who was an early ancestor of Paddlewings was not so fancy but looked more like a very plain worm. He was made up of the soft jelly-drop cells which had stayed together in one long shape. The cells on the outside acted as a skin to contain the rest. You must realize that all of these little cells could feel because they were alive. Now those which had formed together into a sort of worm had a better chance to grow to learn some more. This long shape found it easier to swim ahead than sideways. So all the little cells at the front end came to the bits of food first. They came to places where sun shone on the water first. Everything that could be felt by the cells was felt by the ones in front first. That is why the ones in front began to have more and more feeling. These cells learned more about food and light than the other cells behind them. They got so that they could feel the food and

ONE CELL ~ DIVIDING / TWO CELLS / ONE WORM



light better. The more feeling they had the more like mouth and eyes they became until after millions of years there grew up worms with pretty good mouths and a pair of eyes which could see better than any worms had ever seen before. The cells were always finding new work to do, and the ancestors in Paddlewings' family tree kept changing and improving.



After the worms with eyes and mouth, came fish-like fellows who had a back-

bone made of gristle to help them in their swimming, and gills for breathing in water. They swam everywhere in the sea and up the rivers. Some of them lived in rivers which dried up part of the year, and these would have died if some of their cells had not learned to work as lungs instead of gills. There are fishes in some places now who can live a long time out of water because they have lungs as well as gills. There is a fish who uses his fins like feet to creep up and catch flies out of water. I have seen a minnow in shallow water watching flies crawl down to its edge to drink. He jumped out onto the mud at them and flopped back into the water. If he spent enough time doing that, he might get so used to it that he could stay out quite a while. Well, in such a way some fishes did learn this new trick and the cells that took the job of being lungs helped a great deal. These fishes were almost doing what tadpoles do when they sprout legs and crawl up the bank to be frogs or salamanders. Tadpoles stop using their gills as soon as their lungs are ready for the trip ashore. They grow up to be more like lizards or crocodiles, and are called amphibians because they live partly in the water and partly on land.

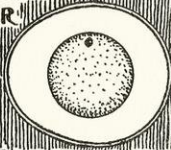
After more ages passed by, some amphibians began to lay eggs on dry

land. The cells of their skins grew hard scales. They were the first reptiles in the world, and from them many, many kinds came to be. As time passed things kept changing. One kind of reptile sprouted feathers where scales ought to be, and learned to glide through the air. After hundreds of years of gliding they learned to fly. As their feathers became bigger and better they looked more and more like birds until at last came the hatch day of the first real bird, a very long while ago. The changing went right on through the ages until now there are thousands of different kinds of birds. Some flew better and better and some flew worse. Some became eagles or sea gulls and some became penguins.

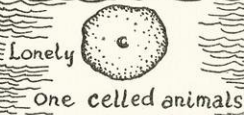
The same changes from cell to worm, to fish, to salamander, to lizard, to bird, took place in the egg which held the spirit of Paddlewings. But as I said before, the penguins have ancestor birds who found they did not need to fly and lost the feathers from their wings which became more like paddles. So, although Paddlewings had grown into a baby bird, he grew into a bird who would never be able to fly. But that is nothing to be ashamed of. It happens in the eggs of the biggest birds in the world. Ostriches cannot fly but they can rush as fast as a race horse.

It was a proud, glad day after all the changing in the egg was finished

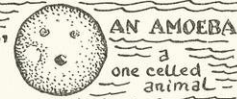
PADDEWINGS
JUST AFTER
BEING
LAID



PADDEWINGS' ANCESTORS
HOW THEY MAY HAVE
LOOKED
FOR
MILLIONS
OF
YEARS



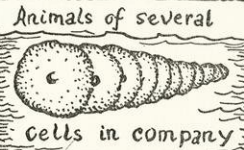
ANIMALS OF TODAY WHO STILL
LOOK A BIT
THE WAY
PADDEWINGS'
ANCESTORS
MAY
HAVE LOOKED



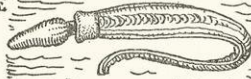
**AFTER
SIX
DAYS**



**AFTER
MILLIONS
MORE
YEARS**



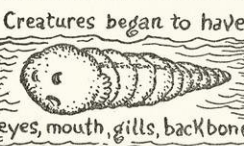
**THIS
CREATURE
LIVES
IN THE
SAND IN
SHALLOW
SEA WATER**



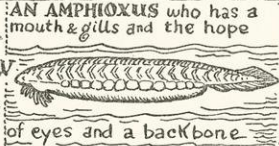
**AFTER
TEN
DAYS**



**AFTER
STILL
MORE
MILLIONS
OF
YEARS**



**IT LIVES
IN SAND
IN SHALLO
WATER
AND CAN
SWIM FAST**



**AFTER
FIFTEEN
DAYS**



DITTO



**CAN LIVE
OUT OF
WATER A
LONG TIME
& HAS LUNGS
AS WELL AS
GILLS & LAYS EGGS IN WATER**



**AFTER
TWENTY
DAYS**



//



**WILL GROW
LEGS & LUNGS
AND LIVE ON LAND A LOT & BE A
SALAMANDER**



**AFTER
TWENTY-
FIVE
DAYS**



//



**LIVES IN
AND OUT
OF WATER
BUT LAYS
EGGS ON
DRY LAND**



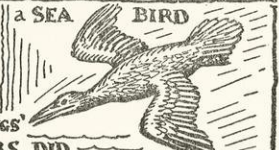
**AFTER
TWENTY-
EIGHT
DAYS,
NEARLY
READY
TO
HATCH**



//



**HE HAS
NOT FOR-
GOTTEN
HOW TO
FLY AS
PADDEWINGS'
ANCESTORS DID**



and Paddlewings pecked the first little hole in the shell to let himself out into the world. Right under the father and mother penguin during their long turns of sitting, this strange history of changes had all happened in a few weeks instead of a few million years. The one cell animal, the egg, had become the many celled animal, the penguin, Paddlewings, at last!

Chapter IV

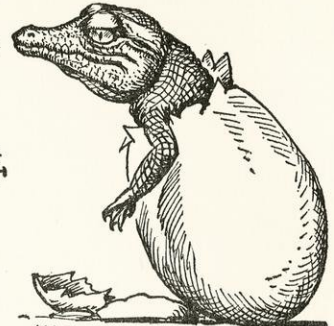
HOW PADDLEWINGS GREW OUTSIDE THE EGG AND LEARNED TO SWIM

IT WAS hard work for Paddlewings getting out of his egg. The shell was very tough, much tougher than a hen's egg. His body had filled up the whole shell as he grew, and there was almost no room for him to make a pecking motion. He was so cramped that he could peck only in one spot right in front of his face. His bill had a good point on it though. He would peck a while and rest and then peck some more until finally he pipped out a little piece of shell and there was a small hole. It was very bright to him. His eyes were half-open and he had never seen anything at all, so the light came through the hole as bright as a star.

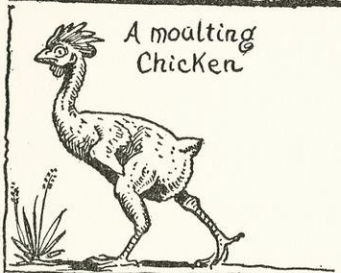
Well, the air also came in through the hole and Paddlewings took a bigger breath than he ever had taken before. This gave him strength and he was excited by it. He pecked much harder on both sides of the hole and tried to straighten out his legs. Pick, crack! Peck, crack! Let me out of this shell, for pity's sake!

That was the feeling he had and suddenly as he gave a push with his

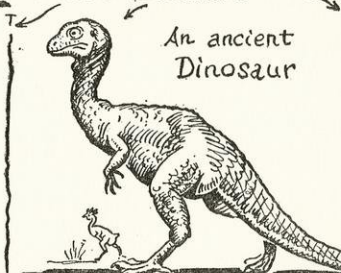
BABY BIRDS AND BABY REPTILES
 HAVE A FAMILY RESEMBLANCE
 PADDLEWINGS AND A
 YOUNG CROCODILE



JUST HATCHING
 MORE FAMILY RESEM-
 BLANCES CAN BE
 FOUND BETWEEN BIRDS
 AND REPTILES SUCH AS
 These "Walkers"



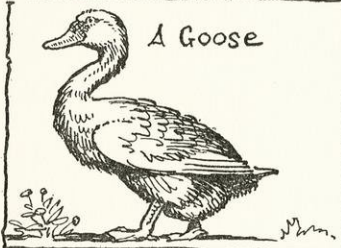
A moalting
 Chicken



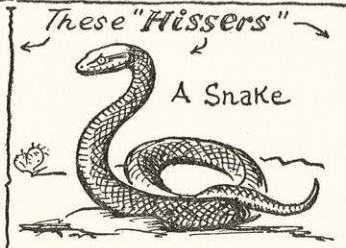
An ancient
 Dinosaur



An Iguana
 or
 Chicken-
 Lizard

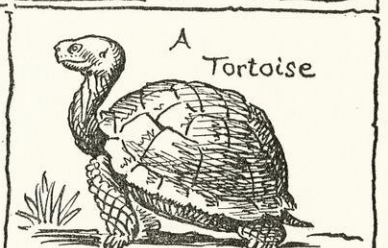


A Goose

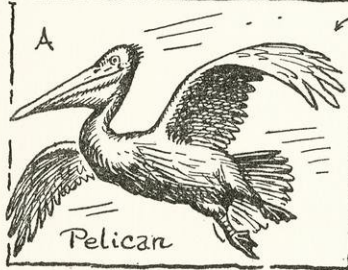


These "Hissers"

A Snake



A
 Tortoise

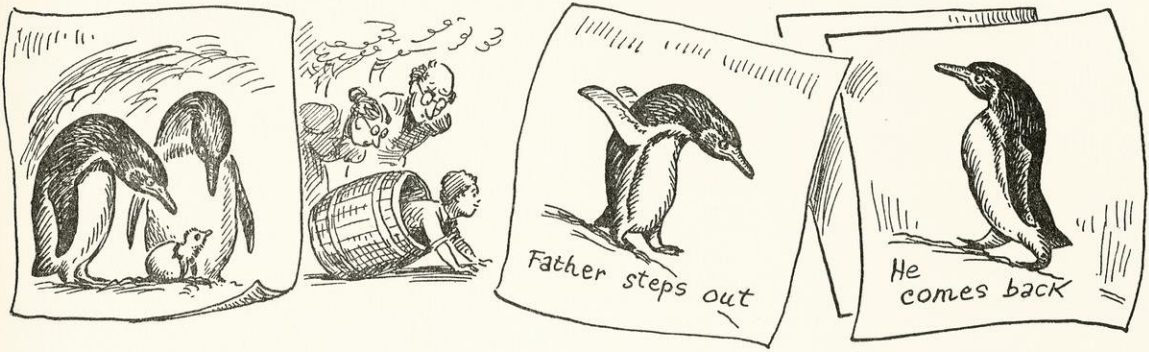


A
 Pelican

These "Flyers"
 THE FAMILIES OF EGG-
 LAYING BIRDS AND
 REPTILES WERE SEPA-
 RATED A VERY LONG
 TIME AGO BUT STILL
 THEY SEEM ALIKE IN
 MANY WAYS
 ~ ~ ~ ~ ~



An
 Ancient Ptero-
 dactyl



legs the end of the shell broke all to bits and his head came out like a jack-in-the-box. Now the mother and father were excited. They opened their big mouths and cried, "Oowah! Hoowah!" They stood on the

edge of the nest, bending over and looking with joy at Paddlewings. They were like two nearsighted people watching a boy crawl out of a barrel.



Paddlewings was taking quick breaths and his little heart was beating like everything, partly from excitement and partly because this was the

first time he had ever had any exercise. He raised one wing and then the other, sticking them out over the broken edges of the shell. Then with one good kick from his legs he came sprawling out into the nest, too weak to do anything but lie under his mother till his down had dried. Newly hatched birds are very damp at first. Besides he had to get used to the light a little at a time, even though the cave was dim compared to outside. The mother sat all over him while the father went to see what he could catch to bring him for breakfast.

He didn't go and catch one good shrimp or fish and bring it in his bill to feed the baby bird. Instead, he caught a shrimp under water and swallowed it! This might have looked as though he had forgotten that he came out to get something for his young one and was eating all the food himself. Next, he swallowed several sardines. Then he started back toward the cave with his stomach nearly full. On the way he snatched up two more shrimps and when he swam through the cave door and walked up to the nest he looked like someone who has got fat while away on a vacation.

Now to get the breakfast out of his stomach and into the stomach of Paddlewings. Some birds, like the robins, carry home food in their

bills which they put into the open mouths of their babies. Most sea birds take the food home in their stomachs. They open their bills and the young ones put their own bills way inside. Paddlewings' father came and stood by the nest. When the mother uncovered him he tried to raise himself on his feeble new legs. His wings quivered, and he made a small squealing sound as his father bent over him. Paddlewings didn't need to be told what to do. Still squealing and quivering, he put his whole head clear inside the open bill of his father who humped and shook himself a little. Up came some of the shrimps and fishes, and down they went through Paddlewings' bill into his hungry insides. The father had brought in much more than was needed, especially as Paddlewings was the only baby they had to feed. Before long the mother took her turn at going for food and so they kept feeding him all through every day while he grew very fast.

In about three weeks he was a foot high and looked almost as big as his parents. He didn't look much like them at that, for his fluffy gray down stuck out all over him and gave him quite a different shape. Their eyes were reddish brown while his were greener, their bills were yellow and black while his was just plain gray and still had the point he used

for pipping out his shell. When he wasn't being fed he was very likely to be asleep, with only his head under his mother or father, for he was too big now to hide any more of himself. But he was beginning to feel restless and rather tired of just sitting in the nest waiting for them to bring in food. It was about time for him to try to walk, but he didn't crawl first. He learned to stand up in the nest, and one day he tried to walk out of it. At first he tottered and fell forward every few steps, but he soon learned better and wandered all about in the cave. By the time he was four weeks old he was very steady on his feet, and the exercise gave him a still better appetite. If he felt extra hungry he would run to meet his father and mother as they came in, squealing and holding his bill forward as if to say,

Fill me full for I feel hollow!

Feed me all that I can swallow!

One day he ran to meet his mother and put his bill into hers, expecting her to hump herself and shake up a fish for him to swallow. She humped herself all right but she shook up some pebbles and Paddlewings swallowed them before he knew it. I don't think he minded that, but his hunger wasn't satisfied. It is good for penguins to eat a few

pebbles once in a while just as it is good for barn-yard hens to eat grit. The little stones help their digestion by grinding the things they swallow whole. After all, birds have no teeth. They never have a toothache and swallowing stones saves them from having a stomach ache.

Paddlewings would soon be five weeks old and he hadn't been out of the cave yet. This seemed to be on the old birds' minds for they both went out of the cave one day and stayed out a long time, or so it seemed to Paddlewings. He felt too lonesome to sleep and he walked up and down in the cave, calling and squalling and watching the door. This made him feel worse and worse. The walking made him feel hungry, and looking at the door gave him a feeling more and more that his parents were out there and he must go out too. Not in the water though! He didn't dare to try to swim all alone, the first swim of his life.

The cave door was rough and jagged and there was a ridge of rock along one side which started in the cave and ended outside. It made a very rough path but he had seen the old birds walk along it sometimes when they were just going out to sit in the sun. As he walked back and forth in the cave he kept getting nearer to the door. When he looked down into the water swirling in the entrance he felt as nervous as could

be, but he was more nervous from not seeing either of his parents. They were the only friends he had; they were everything in his whole life, and now where were they? As he squealed unhappily to himself and stared at the moving water he edged over to one side of the entrance, trying to get as near the outside as he could and still stay as far as possible from that water. This put his feet on the beginning of the rocky ridge. Slowly he worked his way along it, half sideways, partly facing out of the cave and partly facing the dangerous water. With every trembling step he took, the light grew brighter until he was much surprised by his first sight of the sky. As soon as he saw that, he all but forgot to watch the water and cocked his head on one side the better to watch a passing big white cloud. He was so interested that he nearly forgot his lonesomeness and empty stomach. The sky and cloud were too bright to watch for long at first. He had always lived in the dimly lighted cave. So he closed his eyes and tried to rest a minute. So much to get used to!

Resting was no use. His ears caught a scratchy sound. Could it be his mother's feet coming along the ridge? But no, when he opened his eyes he saw climbing up the rocks toward him a great big scarlet crab. It was wiggling its short feelers and moving its eyes up and down. Bubbles

came breaking out of its mouth, and it kept putting its claws out and back as though unable to decide whether or not to come any closer to Paddlewings who stood looking at it in wonder. Several more crabs came up from the water until there was a crowd of them. Paddlewings was not exactly frightened; they somehow reminded him of the shrimps he had been fed, and this made him remember his hungriness again.

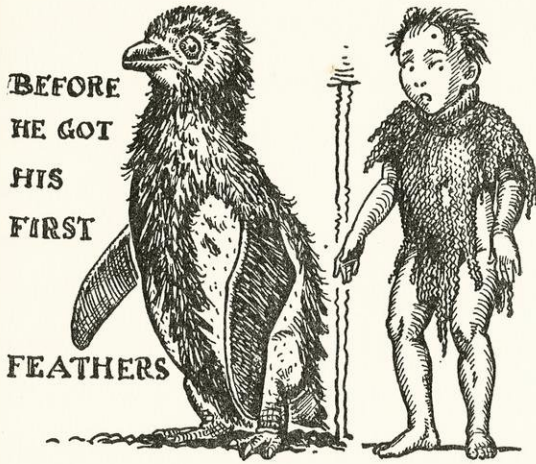
The crabs ran backwards from him as he moved carefully on, till he came to a place in his path which went up steeply. By now he was well out of the cave entrance, out under the immense sky. The clouds and blue were so much farther above him than the walls and roof of the cave had been that he felt dizzy. He could see a little of the sea between the rocks, but still no sign of his parents. Here was this big bump in his way. The dizzy feeling left him as he stretched out his neck, held up his paddles and tried to scramble up over it. Halfway up he stubbed his toe and stumbled, thumping his breast on the lumpy rocks, but he kept right on making a mad scramble upward. The harder he tried the more frightened he felt, when suddenly he reached the top of the bump and there on the other side were his mother and father not ten steps away. They were sitting in the sun with their stomachs full of fishes, and as

Paddlewings dashed to them they both made ready to feed him. He was well rewarded for all his worry in getting out of the cave.

After that the three birds went in and out of the cave together every day. Sometimes Paddlewings saw other baby penguins outside in the sun with their parents. Most of the old birds had two young ones to feed which kept them busier than Paddlewings' parents. That is why he was a bit bigger than the rest; he never had to wait for dinner as long as they.

But Paddlewings and all the others were waiting for something else besides dinner. They were waiting for feathers, and before many days their down began to shed. It came off in patches, making them look most messy and miserable. You may have seen young chickens when they are

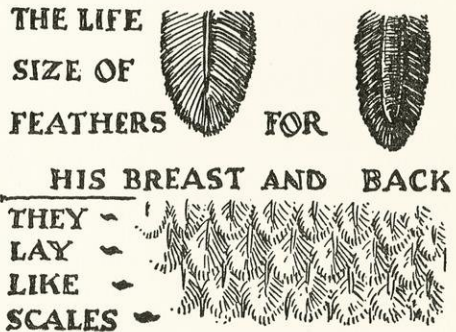




losing their down and starting to grow feathers. They look like chicken scarecrows. So did Paddlewings. I don't think he felt embarrassed about it, but he didn't feel quite as fine as he had been feeling.

Everywhere the down came off there were little points of pinfeathers starting to come through his skin and all this made him peevish, like a baby who is cutting its first teeth. Besides, the sun shone on his naked places and he had to hide in the cave a lot to keep from getting sunburn blisters.

A little more down came off every day, first along both sides of his body and from his legs, then from his head about the bill and down at his tail. Next, his neck and back and breast were bare, and last of all the back of his head and neck and shoulders. When he was all fitted out at last



with new shiny feathers he felt fine. His new coat was not black and white like his parents' but light gray on his breast, and dark gray everywhere else. It would take him a year to grow up and these were the feathers he had to wear till then. They were very short and close to his body. In a way they were more like a fish's scales than a bird's feathers. For a bird who was going to spend much time chasing fish under water this was just right. Our hair, animals' fur, birds' feathers, and the scales of reptiles and fish are all different forms of the same thing. Each creature has a covering which suits his life best. If a hen falls into a tub of water or stays out in the rain she gets wet to the skin. It is not natural for her to go swimming or take shower baths and her kind of feathers is not able to keep the water from soaking through to her hide. But a duck's feathers are oily and they keep out the water very well, while a penguin's feathers are also oily but even better than a duck's for keeping him dry while swimming.

The way the old birds made Paddlewings come out of the cave was to go out themselves and wait till he was so hungry and lonesome that he couldn't stay in there any longer. They taught him to swim in the same way. First they stopped feeding him again. He became so hungry that

instead of waiting for them to bring food to him he ran squealing after them, begging. But they wouldn't give him one little bit. When they thought he was hungry enough to follow them anywhere they started off on a walk. Over the rough lava rocks they went till they came to a sandy beach. Big rocks stuck up out of the sand here and there, and behind some of them were pools of water which the ocean had left when the tide went down. Paddlewings kept right up with his father and mother till they came to one of these pools. When they waded into the water he stepped in behind them, but as soon as he felt the wet on his legs he turned right around and ran out, very much surprised, while his parents swam a yard or so. He wanted to follow them so badly that, although he was afraid, he stood squealing with toes in the water, leaning his head way forward and flipping his small flat wings. The mother swam in close to him and turned to swim away again. Just as she turned poor hungry Paddlewings stretched out at her as far as he could reach, lost his balance and fell on his face in the water. He lifted his head, very much excited and afraid, but he found he wasn't sinking and so he tried to follow his mother. As he moved his wings in excitement he found that they helped him along and in a few moments he was follow-

ing the old birds all over the pool which was a nice kindergarten in which to learn his first lessons. Once he found he was in no danger he began to like the clear quiet pool, and he kept putting his face under the water to look at the bottom, full of pebbles, bright shells, and little seaweeds.

When he did this he used his third set of eyelids. That sounds queer. He had eyelids that worked the way ours do, and one other besides, on each eye. Most birds have a third eyelid but to sea birds like Paddlewings they are especially useful. They were very thin and clear as glass. Instead of being above and below his eye as ordinary eyelids are, they folded out of sight in the corners of his eyes nearest his bill. They moved across his eyes from front to back instead of up and down, and because they were clear as glass he could still see. He used them to keep the water out of his eyes when his head was below the surface, as an aviator uses goggles to keep the wind off his eyes. They worked like a sliding window which is closed when a shower of rain is commencing.

While Paddlewings was holding his head under water he spied small fishes swimming near the bottom. It was the first time he had seen a fish alive. The only others he had ever seen were dead ones which some-

times were spilled when he was being fed. To see that fine food darting about down there while he was floating around on top of the water made him feel hungrier than he felt when he was left in the cave. He expected one of his parents to swim down and bring some up to him, but they simply floated about near-by.

Suddenly he took a good breath, ducked his head deep, worked his wings as hard as he could, and managed to swim down at the fishes. But when he tried to catch one they all turned and swam swiftly to one side while he sped straight ahead, missing his mark and his meal. He stopped flipping his wings and bobbed to the surface to get some air and squeal miserably. Presently his mother ducked her head and went down after the fishes. Paddlewings held his face under the water to watch. He saw her stick out her foot and turn when the fishes turned and catch one easily, so of course he expected her to feed him when she came up, but no such thing.

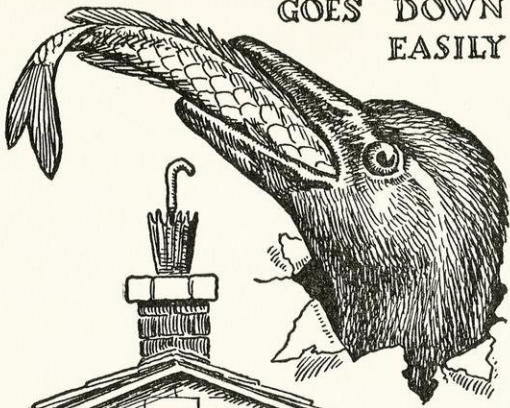
There was no use begging, he would have to try again and do what his mother did. He swam down and when the fishes flitted to the right he put out his right foot and kept his paddles going. This turned him in the very same way you can turn your sled while coasting, by drag-

ging one foot on the snow. He made a grab and got a fish's tail in his bill. That was a mistake, but he was not quick enough to get it by the belly. Each time he let go a bit to grab it further forward the fish wriggled forward too. When Paddlewings, nearly out of breath, finally did get a firmer hold and tried to swallow the fish, tail first, it stuck in his throat. He had to let it go and come up for air.

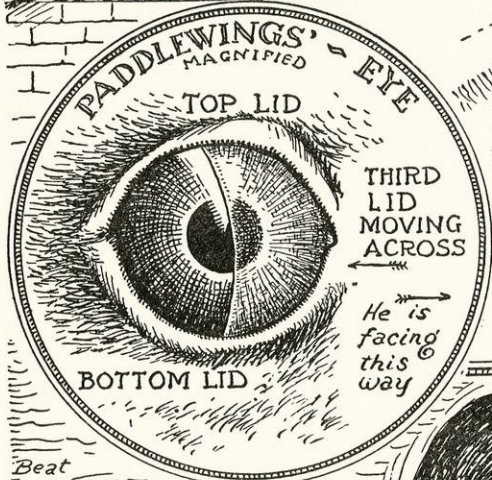
Meanwhile his father went down. Paddlewings, watching him, saw him catch a fish in its middle, give it a quick twist, and swallow it head first. So that was how! Down he went and as the fishes went to the left he put out his left foot, turned and caught a good one by the belly, pinched hard, twisted it about, and, oh, joy! swallowed the first food he had had in hours. A fish has to be swallowed head first because the sharp edges of the gill-covers behind its head and all its scales, like the hairs on any animal's body, point backward. The scales catch, and may hurt the throat of anything trying to swallow the fish tail first. Perhaps that is why so many fishes in tropic seas have bright yellow tails, to attract the notice of enemies about to eat them and make them try to swallow the wrong end first!

That was all the old penguins needed to teach Paddlewings. If he

GOES DOWN
EASILY



WONT GO
DOWN!



Swallowing fishes
is like the
riddle, "What
will go up a
chimney down,
but wont go
down a chimney
up?"

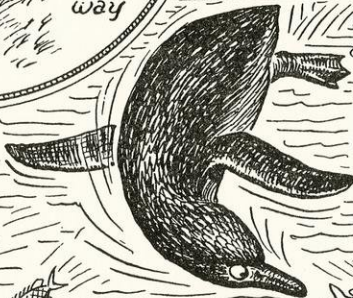


Beat

it boys!

He's

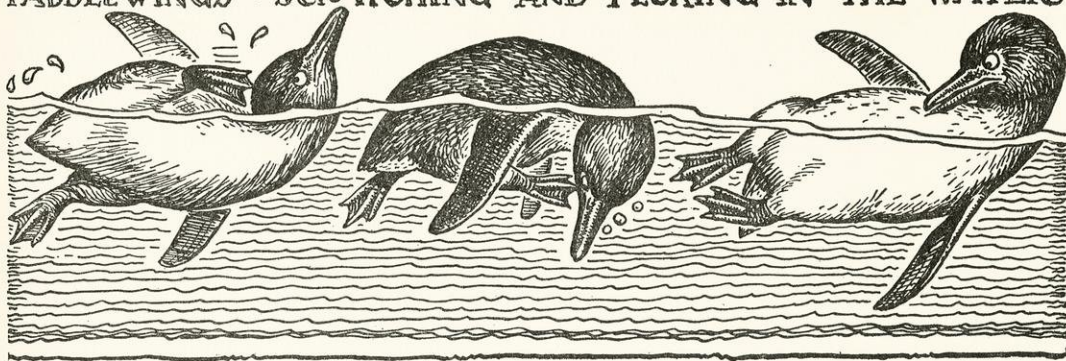
learning how!



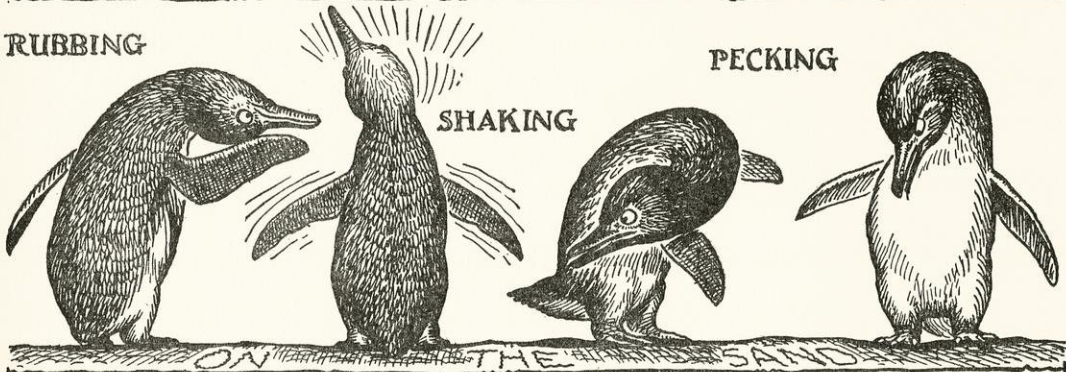
could swim and catch his own dinner he would be all right. The other fancy things penguins do in the water they let him find out for himself.

For several days he fished in the rock pools when the sea went down, and all the other young penguins were learning, too. They learned to do many things while floating. The sudden coolness of the water made their skins feel itchy, and they would all start scratching themselves at once in a half dozen different places. Maybe when one itched and scratched the others felt itchy from watching him. You know how that sort of thing happens. If you are sitting in a railroad train or station and somebody yawns, five or six other people will have to, even though they don't care to be copycats. It was a good deal like chickens when they take dust baths—one does it, so they all do it. The penguins made the same motions in the water as chickens do in the dust. First they rolled on the left side, then on the right, all scratching the backs of their heads first with the right foot, then with the left. This kicking of the penguins sent them spinning in circles all over the pool. If a wing wanted scratching they could attend to it in the same way. If the bill needed the scratch they put their faces under water and used one foot again. Paddlewings had

PADDLEWINGS SCRATCHING AND PECKING IN THE WATER.



RUBBING



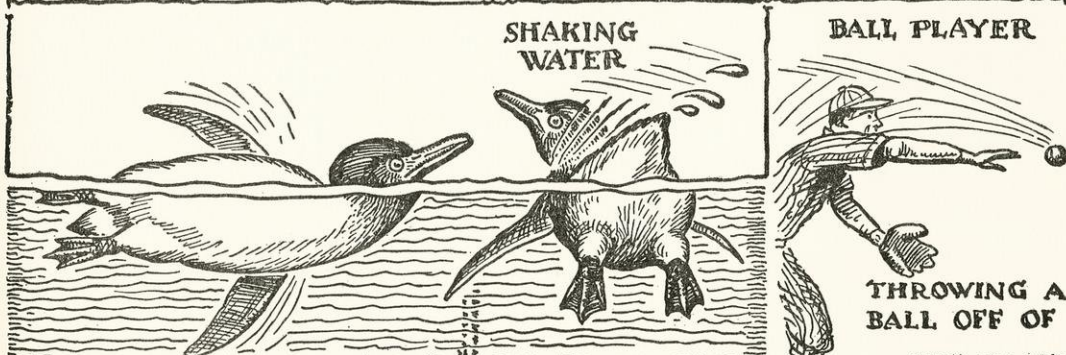
SHAKING

PECKING

ON THE SAND

SHAKING WATER

BALL PLAYER



THROWING A BALL OFF OF HIS HAND

SWIMMING ON ONE SIDE

an itch right on his stomach and found that he could swim almost on his back while making quick little pecks at the spot.

Often all the penguins, young and old, swam in the same pool with Paddlewings. So much swimming down for fish, such scratching and pecking, made a great splashing, which they enjoyed like so many boys in the old swimming hole. They pecked each other in fun and sometimes an old bird would cry "Oowah!" with excitement while the young ones kept up their squealing, "Seeps, wheeps, feeps." Afterwards, up on the sand or rocks while drying, they rubbed their heads on their wings, shook themselves, and preened their short feathers. Water could not stay on their tails very long because they whisked them rapidly from side to side. Each whisk threw off drops of water, very much as a ball flies from a pitcher's hand when he swings his arm and lets it go.

Chapter V

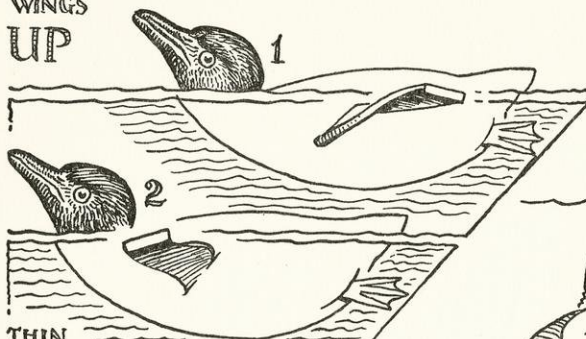
HOW THE PADDLES WORKED. HOW HE ENTERED THE OCEAN AND HIS ADVENTURES THERE

I WANT to explain how Paddlewings paddled with his wings, how he “flew” in the water with his paddles. I wrote the name of this chapter and then tried and tried to tell just how it was, but some things are easier to explain in pictures and easier to understand in pictures. It is like a Swede trying to tell an Italian about a bird when neither knows the other’s language. He has to use signs, jump around, and flap his arms. So I have made some signs on paper, a page of drawings to explain about this bird who would some day be able to row himself so well that he could go hundreds of miles if he cared to, sometimes at the surface, sometimes many feet below.

Paddlewings had never been in the ocean yet. He was still going to kindergarten in the tidepools. But before long this did not satisfy him any more and he began walking along the beach. He saw the great sea stretching out before him wide and deep, and he wanted to try his young wings in it. Older penguins did, so why not he? You know how

PADDEWINGS ROWING OR
FLYING IN THE WATER

WINGS
UP

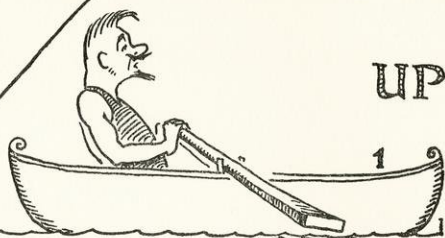


THIN
EDGE
FORWARD

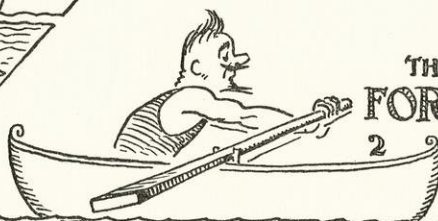


THE OARS OF A BOAT-

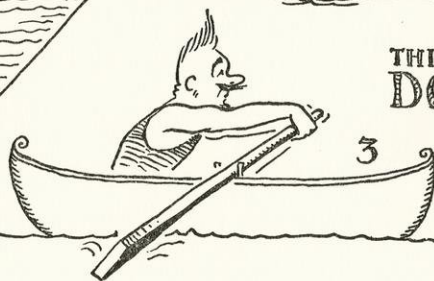
UP



THIN EDGE
FORWARD



THIN EDGE
DOWN



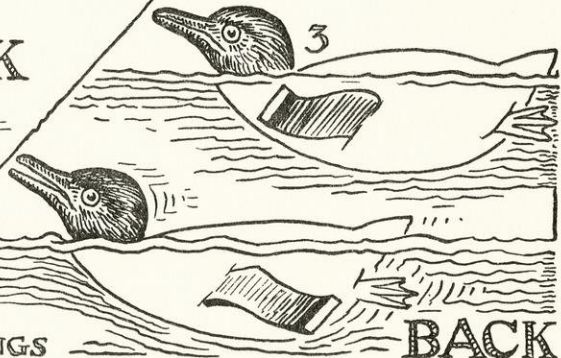
WINGS
DOWN

THIN EDGE
DOWN

OARS BACK



WINGS
BACK



waves that roll onto the beach can knock you over. That's what happened to Paddlewings when he tried to get into the ocean. The ocean got onto him, all over him, and rolled him around very roughly. He picked himself up as soon as he could and ran back up the beach out of reach of the waves.

Instead of trying again he walked toward the good old cave that had been his home, but as he went along over the rocks he couldn't help looking at that ocean. Presently he stopped on a ledge of rock and stood leaning forward as he had done at the tidepool the day he fell in, trying to reach his mother. I suppose he felt a good deal the way we do just before we jump into the water when it is cold. You want to, but you can't quite start. You wait, looking at the water, until you want to so much that finally you just jump in, and there you are enjoying yourself. He would lean forward, lower his bill holding out his wings only to drop them, straighten up and look about as though to see if anyone had noticed how he hesitated. The sea was swelling up against his rocks and swirling past him into the entrance of the cave, while all below him as he looked he saw the fishes come and go, some like those in the tidepools but many other kinds, very different.

Curiosity is almost as strong as appetite in penguins. He must find out all about those different fishes. They might be good eating and they might not, but he could never know, standing up there. If you add curiosity and appetite to a penguin on the bank, plus strange fishes in the water, the answer is exactly one jump, and that put Paddlewings right off the rocks into the ocean. Where he jumped in, it was only a little deeper than the tidepools, but it sloped down to deep water very steeply. When penguins dive into water about four feet deep they always go bellyflop. They only make a clean dive in, head first, when it is deeper than that. So he went bellyflop; and the big splash was grand, while the ocean lifted him up and let him down and rocked him from side to side. It was much more fun than in the tidepools.

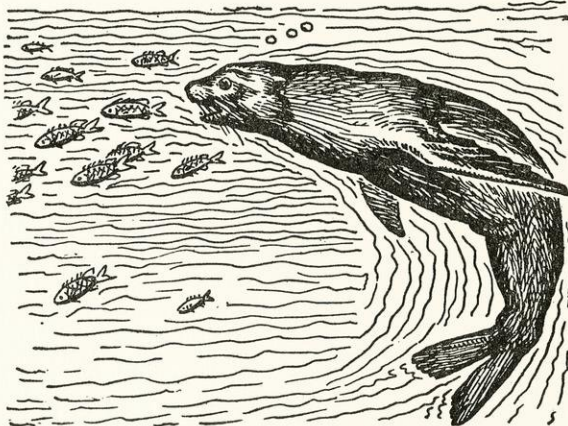
Now for a look at those fishes. He put his face under the water and what he saw gave him an unpleasant feeling. It was a sea lion chasing the very fishes he wanted to chase. I cannot say for certain if sea lions ever eat penguins but they probably do when they get a chance. They don't get many chances because way back in the Antarctic where Paddlewings' ancestors came from there are sea leopards who are always catching penguins, so that now after thousands of years a penguin



knows without anybody's telling him that he had better watch out. Paddlewings had seen sea lions before, for they sometimes came out of the sea to dry on the rocks where he went to kindergarten.

But he was never nervous about one till he saw that he was swimming in the same water with it. As he watched, it discovered a school of herrings which went swimming for their lives straight out to sea. The sea lion was right after them and soon they all were out of sight.

As they disappeared he took a big breath, ducked his head and swam down, down, down, farther and farther from the shore. At last he was going to find out about those odd fishes. He had two ways of finding out about anything. One was to look at it a long time, and the other was to take hold of it with his bill. By looking at something he could see how it moved, he could tell by the size whether it was probably dangerous or not, but if he took hold of it he could tell what it tasted like, if it was



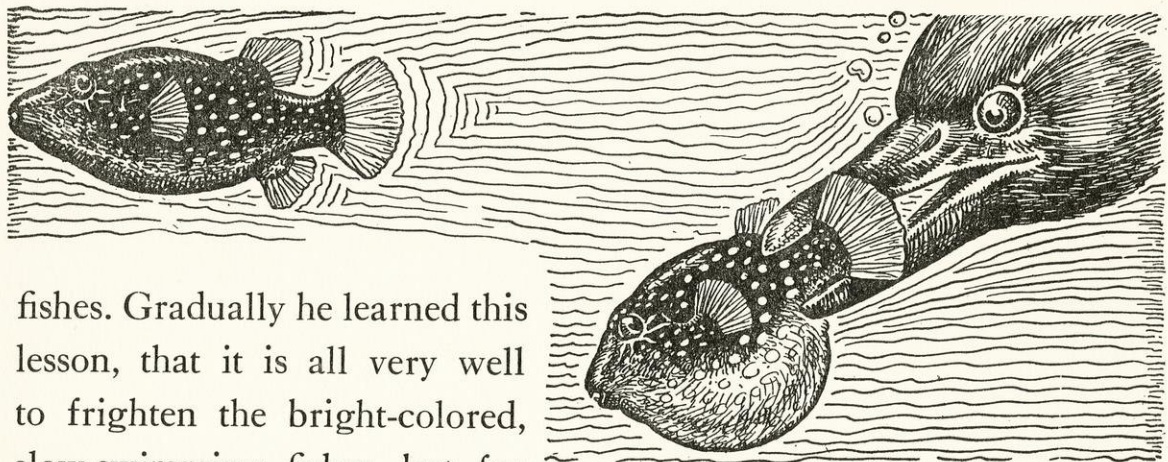
hard or soft, alive or dead. That is why he was not contented to float at the surface and study the fishes. He had to test them with his taster.

Just ahead of him were several fishes, small enough to swallow, who had a very different appearance from any fish his parents had ever brought him. They were short and not very shapely, with black backs and sides covered with pale blue spots which looked like skies full of stars. Their bellies were pink, their eyes green, tails and fins nearly transparent, but the tails had some color like their faces which were tan. Their mouths appeared to be trying to say words like "boop-a-doop." Paddlewings made a snatch and caught one right on its caudal peduncle. A caudal peduncle is the part of a fish's body which has the tail fin on it, and it is no pleasure for any fish to have a penguin pinching it with his bill. Paddlewings soon let go. It didn't taste as good as the fish he was used to and it was soft and mushy, with no scales. But he let go from surprise mostly, for it suddenly swelled up to three times its size, looking like a great pink bubble. It was a puffer fish which bloats itself that way for self-defense.

Paddlewings was fascinated and after going up for another breath of air he went right down again to see what else he could stir up. Then he

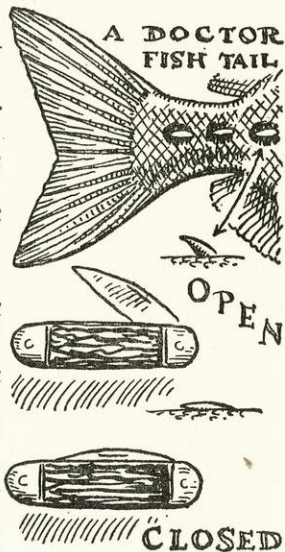
met the Bumpheads. They were splotched all over with yellow and black and white as though some house painter had been wiping his brushes on them. Most fishes have their colors in some sort of design, but not these. When Paddlewings went at them they swam their fastest which was pretty slow and he teased them with a few nips on their sides and clumsy tails while they made for deeper water. There he spied their cousin the Fathead. He was bigger but about the same shape, purplish red all over except for a white chin and a big yellow spot behind his head. These fishes are called Bumpheads and Fatheads because fat collects in a lump right on the place where they carry their brains. Some people think that the fat is stored up there to be ready for a time when the fish cannot find food. It is somewhat like a camel's hump, and it looks as though they did have something on their minds. Scientists call the Fathead "Pimelometopon," so the next time you want to call someone a fathead for being stupid you can call him a Pim-el-o-met-o-pon.

When the penguin nipped at the Bumpheads he didn't like the feeling of their flesh. It was too soft and he had no wish to eat them even if they had been smaller. He played in the Cove for many days and whenever he felt hungry he chased some sardines or herrings, fast, silvery little



fishes. Gradually he learned this lesson, that it is all very well to frighten the bright-colored, slow-swimming fishes, but for the most part they are not much good for food. They have soft flesh and a stale flavor. When it comes to eating, chase the fast fishes who never lie asleep among the rocks but swim all the time in schools. They have the fresh firm flesh.

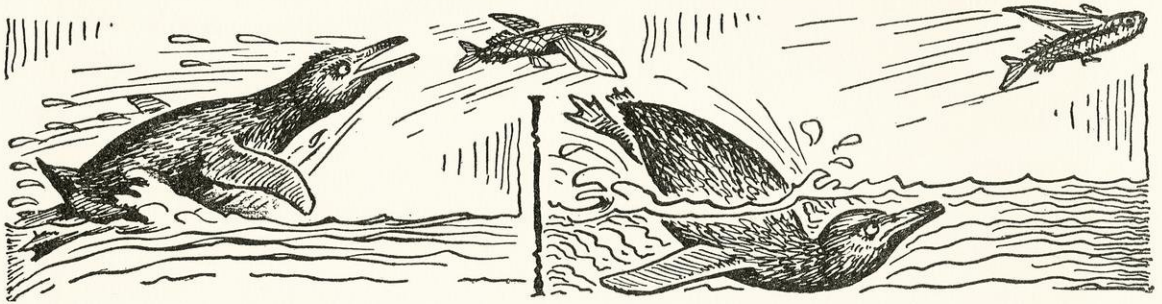
It was a good thing Paddlewings got the habit of never trying to eat the bright-colored fishes, for there was one kind in the cove who could have torn the inside of his bill and hurt him seriously. You remember I said I thought many fishes had yellow tails to tempt their



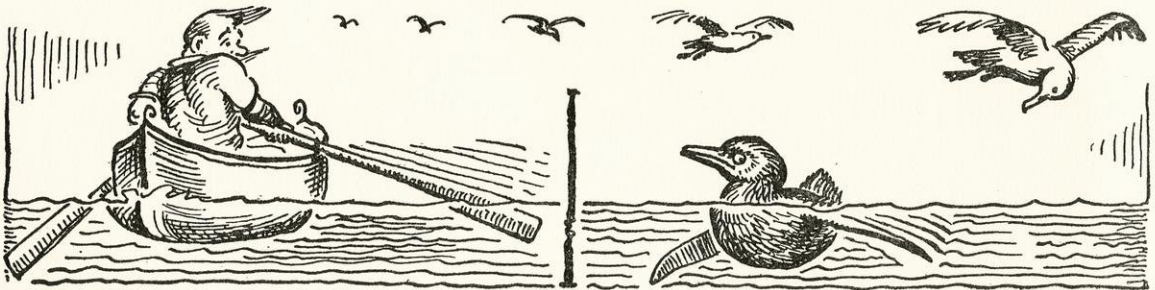
enemies to try swallowing them backwards, which cannot be done. Well, there was a yellow-tailed fish there, called Doctor or Surgeon fish, because sometimes doctors have to use knives to perform operations, and this fish carried three sharp knives on each side of his caudal peduncle. With these he was willing to operate on the inside of any animal's mouth that might try to swallow him, whether some larger fish or our friend Paddlewings. The blades were very small but awfully sharp, and folded into the peduncle almost as a jackknife blade folds into its handle. It would have been as wise for Paddlewings to take that tail in his mouth as for you to put six half-open jackknives into your own, and then shake your head. Perhaps Paddlewings left him alone too, because he had that same boop-a-doop expression which the Puffer wore, though he wasn't soft, but hard as nails.

Some of the fishes Paddlewings pestered are easier to describe in pictures. He could make them change colors by dashing at them. Some would change from fear, and some from anger, while some would try to be unseen by imitating the color of the sea-bottom wherever they happened to be.

But Paddlewings went on learning things a penguin ought to know.



He saw some very fine silver fishes one day which, when chased, leaped out of the water and did the very thing he could not do, for all he was a bird. They flew, and try as he often did, he never could catch flying fishes. But in chasing them he learned to porpoise, that is, to leap out of the water while going full speed and keep it up, over and under as a porpoise travels. He learned to steer with his wings as well as by dragging one foot. Sometimes he just held one wing steady and paddled with the





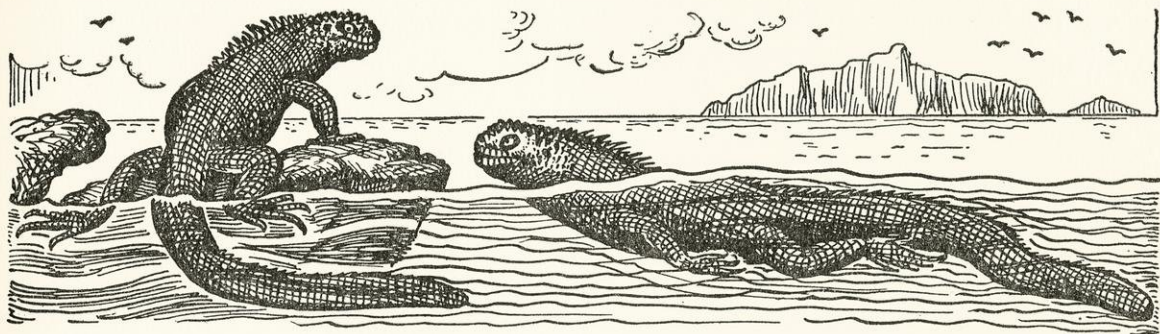
BUMPHEAD, FATHEAD, DOCTOR FISH, & OTHERS WITH YELLOW TAILS

other as a man turns a rowboat about. Especially he learned to come out of the sea onto the rocks or beach without getting upset and tumbled over by big waves. Just before he came to the land he would swim hard and raise his tail. This lifted his head so that he could come shooting out of a wave to land high and dry on both feet in the position of somebody doing the broad-jump.

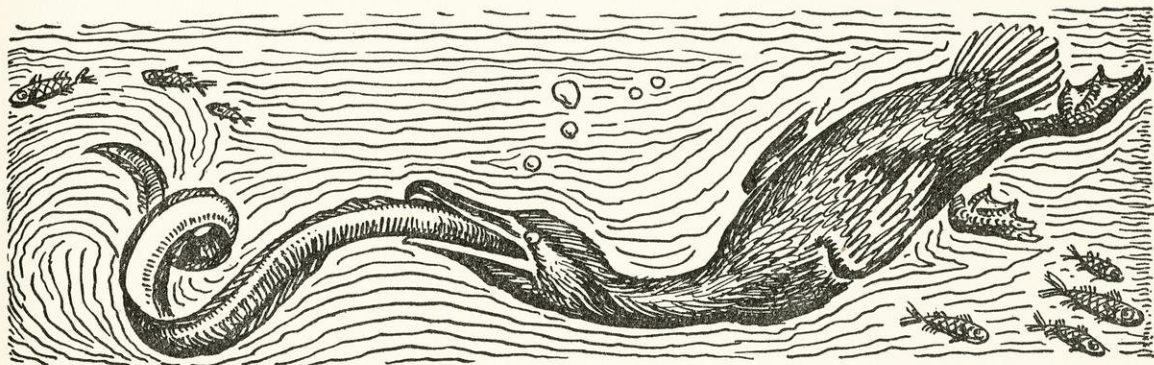
At the same time he was getting acquainted with the other creatures besides odd fishes. There was *Amblyrhynchus* (ambly-ring-cuss) for instance. His name didn't mean what it sounds like, for his way of walking was not ambly, he had no ring, and he was not a cuss. His crawling was neat, his swimming was fleet, and his nature was sweet. He was a marine iguana or sea lizard. There are no sea iguanas anywhere else in the world. There are many kinds of land iguanas in the world and one kind lives at the Galápagos Islands. His name is *Conolophus*. Perhaps only this kind came floating here when the Islands were very new. But perhaps after a lot of the land iguana children grew up, a volcano spread hot lava over miles of the land, separating one half of the children from the other half. Maybe one half had only a strip of seacoast rocks to live on while all the plants they had been used to eating were buried in lava. You

can imagine them sitting upon high rocks, watching the hot lava flowing over the land. They may have sat there a long time while the black lava was cooling and hardening. But even after they could get down from their perches and walk upon it, nothing could grow there to feed them perhaps for years. Iguanas can go without food a long time but not forever.

They had to use their brains. No doubt many starved to death; but some of them, sitting by the sea, must have noticed the plants down in the water at low tide. Land iguanas can swim pretty well, and they could have learned to go into the water to get that good juicy seaweed. Of course the ones that were the best at it were the ones who raised most of the new children, and those children would be good swimmers like their parents. Gradually the iguanas who had to get their food from the sea began to look different from the ones who had not been driven down by the lava. Their tails grew flatter and more suitable for swimming, and their teeth grew more and more solidly until their top edges all matched evenly, making cutting edges to bite off the seaweed like two curving knife blades. And their bodies turned black just like the lava. The land iguanas are black and yellow and red. Some have more black than



others. Now the water around the Galápagos Islands is full of sharks, and I think that when the hungry land iguanas began getting breakfast in the seaweed the sharks found it out and made their own breakfast on some of the iguanas. They saw the ones who had more red and yellow color and missed the ones who looked more like black rocks, until finally



the only iguanas who were able to eat the seaweed in safety at all were the black ones, so that to-day all sea iguanas are black. As they sit in the sun on the rocky shore you can hardly tell lizards from lava.

Paddlewings saw the sea iguanas almost every day, and I don't think he minded them a bit. In fact he may have liked them, for as I said their dispositions were sweet. But there was a bird neighbor who had a very horrid disposition and I think he would have enjoyed keeping Paddlewings from eating any fish if he could. For this bird was a terrible glutton. He had a long skinny body and a long skinny neck and face. When he stood up straight he was nearly two feet high. It is hard to believe, but he could swim out into a school of herrings and swallow over two dozen of them all seven inches long. He could swallow an eel three feet long without choking, and he could get fishes down that were wider than his throat, about as a snake swallows eggs. His long neck gave him a snaky look and he could strike very much as a snake strikes. Out of that long throat came only one kind of sound. It would have been better if he could make no sound at all, for the only noise he could make was exactly like a bad case of static on the radio. In spite of all this he had some things in common with Paddlewings. He could not fly, and lived on fish he chased

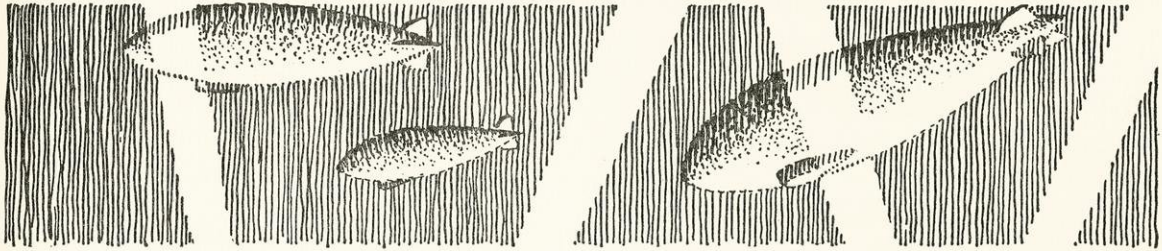
beneath the waves. Here were two kinds of birds then, who had forgotten how to fly, the smallest kind of penguin and the largest kind of cormorant. Everywhere else in the world cormorants can fly, but this one's wings were short and stubby. He held them close to his sides while swimming and ran under water, catching the fishes by jabbing with his long neck and beak.

Chapter VI

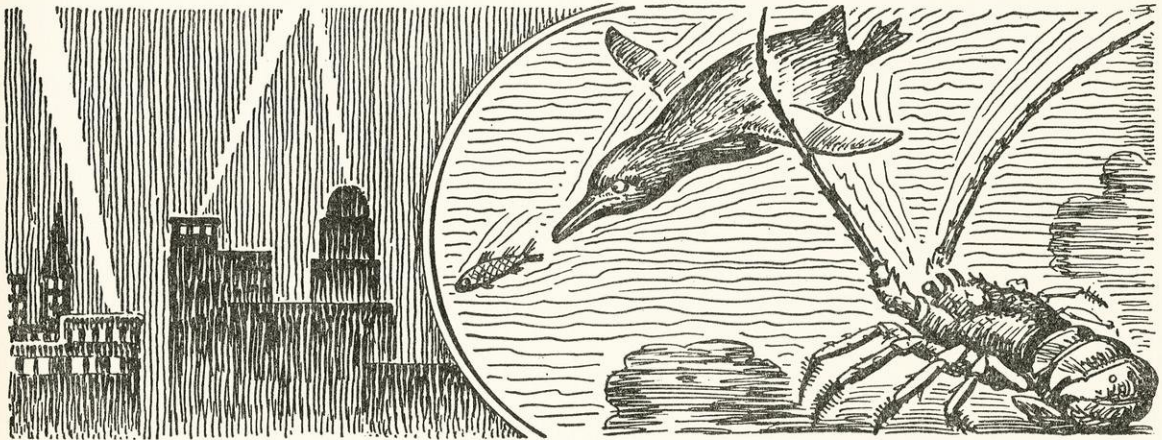
THE FAMILY GOES CRUISING. THE WATERSPOUT. PADDLEWINGS LEFT ALONE

PERHAPS it was the presence of such horrid noisy neighbors which prompted Paddlewings and his parents to go off on a trip, for one fine day they set out, swimming from Tagus Cove northward along the edge of the big island marked Albemarle on the map. They loitered along day after day, fishing on the way and going ashore to sleep in a new place every night. Sometimes they stayed at one place a week or so, but Paddlewings was always eager to start out for the next place. He could make more discoveries if they kept going. So he was often out by himself, swimming about, when the parent penguins had settled to stay in one spot for a spell.

Once he had a tough time trying to catch a fish he saw near the surface as it went down in great zigzags toward some coral rocks. In fact he didn't catch it at all. What he caught was a whipping which a spiny lobster gave him. Spiny lobsters have no big claws like the lobsters you see in stores and restaurants, but they have feelers two feet long, very



stiff and heavy and covered from one end to the other with sharp spines. All lobsters are very nearsighted and they use their feelers to help them know what is going on about them, like searchlights waving above a city, looking for an enemy airship. They sit among the rocks, waving these feelers and looking for trouble which is not long in coming as a rule,



for life in the ocean is even more troublesome than life on the land, what with everything trying to eat everything else. When this lobster saw the fish rushing down, he thought he saw trouble coming his way and switched a wicked feeler, which dug poor Paddlewings who was right behind the fish. Some of the spines rasped his right wing and he was glad to get out of the water and sit with the old birds, while salt water stung in the cuts the spines had made. But they were only scratches and soon he was swimming about as though nothing had happened.

Their trip had taken them up around the north end of the island and they were swimming down the other side of it. One morning the air was very muggy with no breeze blowing. The hot sticky dampness made the penguins' skins itch. They sat on the rocks as the sun came up in the misty haze, and preened their feathers. Paddlewings rubbed and scratched and pecked himself in every way he could think of and so did the others, but there was no comfort in the air. The best thing to do was to get into the water, and so they resumed their cruise, catching little fishes now and then to make a breakfast. All the while great heavy clouds were forming overhead. They grew heavier and darker, and from time to time faint flickers

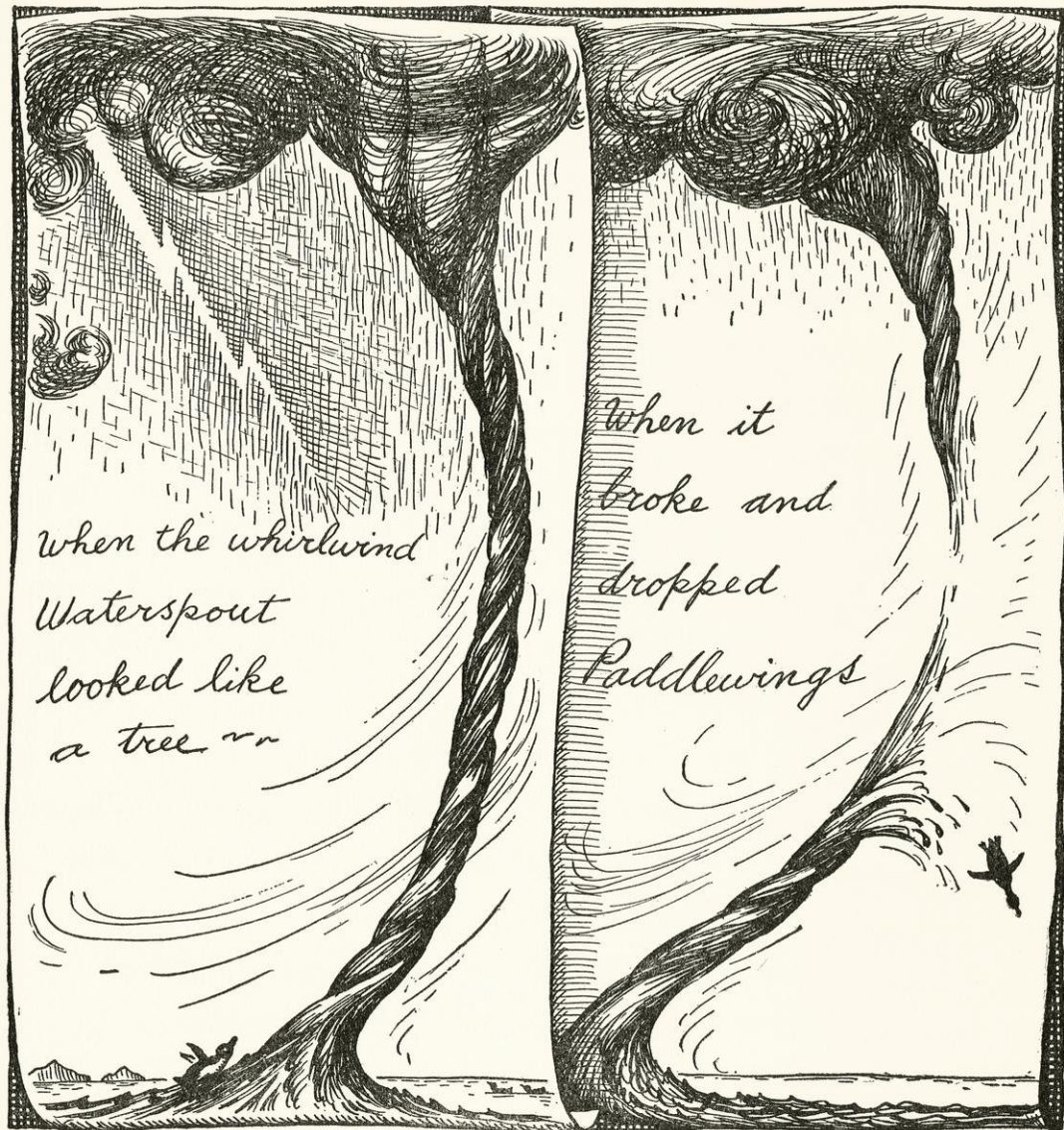
of lightning flashed from them. This didn't disturb the birds at all, for they were fairly cool and comfortable in the water.

Presently Paddlewings saw one of those precious flying fishes. It lay in the sea at the surface with its big wing-like fins half open as though the sultry weather had made it sleepy. Maybe he could sneak up on it! But no sooner had he started toward it than the fish woke out of its doze, shook its tail like fury, and went away with poor Paddlewings tagging behind. There was still hope, for the fish couldn't fly at first but had to get up a good speed in the water before leaping into the air. Paddlewings knew this and thought he still had a chance to catch it. They were dashing far ahead of the parent penguins when the fish began to skitter along the surface like a hydroplane before it takes off. Soon it was flying between the sea below and those big black clouds above, while Paddlewings had the horrid feeling of being a bird who could not fly. His wish to fly was stronger than ever before and it made him sad. Not that he really thought about it, but he felt defeated as he porpoised out after the fish and fell back plop, while the fish went on and on through the air.

Then came the awful waterspout. You have seen the wind pick up dry

leaves and whirl them up and carry them along. All about Paddlewings the air began to whirl a hundred times as hard as that, stirring up the quiet sea which soon was whirling also. He saw his parents coming along some distance back, and everywhere the sea was smooth as glass except right near him. When he tried to duck below and swim to his father and mother, he couldn't do it. The whirling mass of air and water was rising higher and it caught him up till presently he was whirling with it, around and around and up and up. The fast whirling made him dizzy, but, wonder of wonders, he was moving higher and higher above the sea. In a way he was flying, though a lot of sea water was flying with him. He was very dizzy and couldn't see where he was going, but his parents saw and were very much afraid. For the water rose up in the shape of a spinning tree trunk, and Paddlewings was lost to their view in it. As it went ever upward the clouds right above began to whirl and come down till they met the water halfway. Now it did look like a spinning tree with poor Paddlewings somewhere mixed in the bark.

Suddenly the tree broke in two and the watery trunk fell back into the ocean. By this time Paddlewings couldn't tell whether he was going up or down, but he landed in the sea head first as luck had it, going down in



When the whirlwind
Waterspout
looked like
a tree ~ ~

When it
broke and
dropped
Paddlewings

seasick spirals. In the water his head cleared quickly and soon he rose to the top to breathe and look for his parents. But they were nowhere to be seen. He was far away from where he first was lifted into the air. He squealed and screamed, for he was not old enough to shout "Hoowah!" yet, but no answer came. No use. All day he swam, always watching the water and the rocky shore, but when evening came he had not found them. He went ashore on some rocks and waited for darkness while many boobies, frigate birds and gulls flew over his head on their way home from their fishing. It was a lonesome night and he squealed softly to himself as he sat trying to sleep. The air was still muggy and uncomfortable, the way it is when people wish a good storm would come to clear it.

As the faint light of morning crept across the water he stretched himself and jumped in, being hungry and worried. I won't say he thought, "Oh dear, I wish I knew where my parents are," but he missed them just the same; and he didn't say to himself, "I do wish a thunderstorm would come," but he would have been glad of a change in the weather. It came that very morning, a regular old soaker. The sky and sea became as black as coal. The boobies and frigate birds who had started out to go fishing

came back to the land and their young ones, as a cool strong wind began to blow. Paddlewings felt better when it came, bringing with it the rain. As it churned up great waves it blew the tops off them. You can imagine a great giant blowing the foam off an enormous mug of beer. The spray and rain flew so fast that Paddlewings could hardly tell when his head was above water, there was so much water in the air. He bounced around in it till the waves were so strong and rough he decided to get to land somewhere.

The nearest place was an island called Seymour, and I think that was lucky, because there was a very long sandy beach there. If he had tried to land on rocks he might have been dashed to pieces in that raging storm. As it was, he swam well below the surface where the water was not so roiled, now and then coming up for a breath of air and ducking right under again after taking a quick look to see how near he was getting to the beach. As he came close a whopping wave fairly threw him up the slope, and he ran up further while it went sizzling back, only to be smothered beneath the next one. The storm blew itself out in a few hours and though the waves still roared up the beach, the sun came out clean and dry while the new breeze was fresh and gentle.

Paddlewings began to feel almost happy in spite of his lonesomeness. The change in the weather made him feel light and strong while this new place excited his curiosity so much he nearly forgot he had no penguin company. There was other company there. Above the beach were scraggly trees and loose rocks in the sand, many of which were a dark reddish color with here and there a smutch of yellow on them. The volcano which made this island had thrown out a different kind of lava than the black stone he had always seen, and the yellow was sulphur.

He looked at these things a long time. He took hold of the little trees with his bill. To see him studying this way you would have thought he was very hungry and did not know enough to go fishing. It looked as though he were trying to eat the trees and the rocks, for he sampled them too. To his astonishment, when he gave a rock a tweak it jumped up and ran six feet, looking like *Amblyrhynchus* turned fat and decorated with red and yellow. As you realize, this was cousin *Conolophus*, the land iguana, or the chicken lizard as some people call it. *Conolophus* stopped as suddenly as he started, nodding his head up and down as though to say "Howdedo?" but made no sound. The movement of his head was very much like that of a rooster who is giving you the once over. He looked



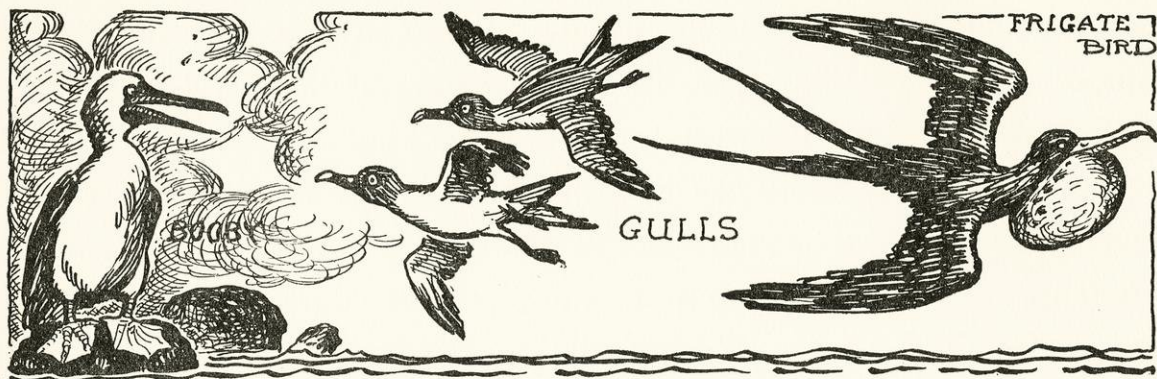
PADDELEWINGS TRYING TO STUDY CONOLOPHUS~

like three things at once. His manners and his eyes and even his claws would make you think of chickens. He looked for all the world as though he had come shooting out of the volcano, made of lava and sulphur, and he looked like the lizard he was. Paddlewings wanted to study him some more, but when he walked up and made as if to tweak him again, Conolophus suddenly opened his mouth and got ready to study some himself. His teeth were not like the mild marine iguana's. They were separate and sharply pointed and his jaws were much larger. Paddlewings saw a pretty pink tongue that looked like a good morsel of food, but he kept a safe distance now and watched Conolophus crawl under a tree. Then half the rocks lying there suddenly nodded their heads, because they were really more Conolophuses.

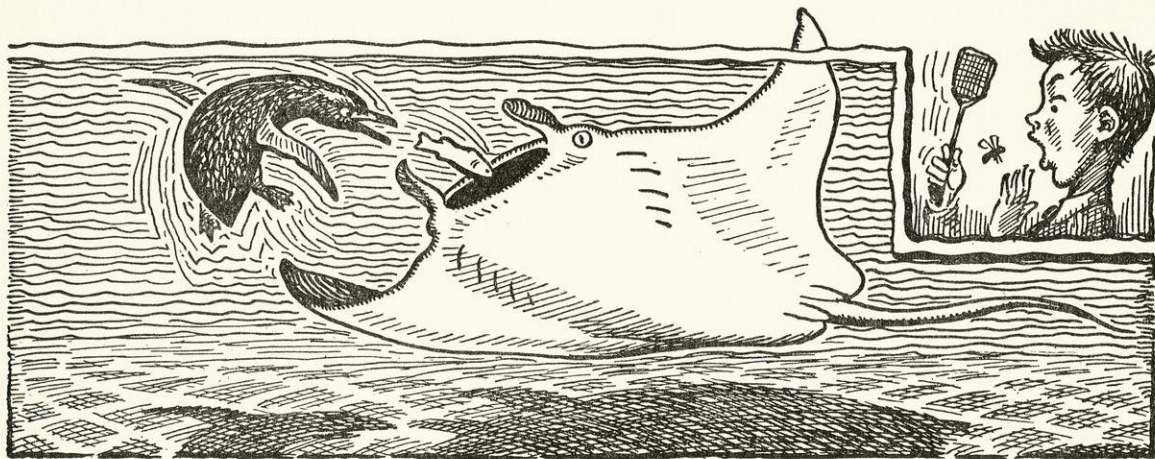
Paddlewings wandered by himself for many months and all that time never saw a single other penguin. When he felt lonesome he swam ashore to see what he could see. He would sit for hours every day with his stomach full from his morning fishing, just watching the sea and sky and sometimes sleeping in short naps. He saw the white bellies of sea gulls turn bright green, reflecting the color of the sea as they flew over it.

He saw the black bellies of the frigate birds, with once in a while one who wore a red balloon beneath his bill. When the father frigate bird wants to make a grand impression on his wife or neighbors he swells up the red skin on his throat and thinks he looks beautiful. They nest in low, thorny bushes and it always looks as though any minute a thorn would prick his balloon and pop it. But his skin is tough and this never happens. Blue-footed boobies would come and sit near Paddlewings, staring, but he would stare right back at them. He rather liked to have them there at times. Their feet looked like patches of bright sky cut out from between the clouds.

One day he was swimming after his breakfast four fathoms below. The sun shining down through the sea made a waving pattern of light on the bottom, through which his shadow chased the shadows of the fish. Presently Paddlewings saw a shadow twenty times as wide as his own and he felt frightened, for big shadows are cast by sharks and sea lions. He looked up to see a giant devil fish tearing along on the surface. People call it a devil fish because its shape suggests a horned devil wearing a cloak. But it is not dangerous. This one acted as though it was very un-



comfortable, but it had no way to help itself. Some small creature called a parasite must have become attached to its side, biting it there. The best it could do was rush about, hoping to shake the parasite off. It would be



bad if we had no hands but could only run and jump to get rid of mosquitoes sometimes. The devil fish jumped way out of the water and fell back, making mighty splashes, for it weighed a ton at least.

Just then an odd white fish with nearly no fins swam right out of the devil fish's gill-slits whereupon the old fellow stopped rushing, and whereupon Paddlewings started rushing. He chased that fish in zigzags and circles all about the devil fish until it actually dashed right into the poor old fellow's mouth. Paddlewings had to do a quick dodge so as not to go in too. Did a fly ever get into your mouth? I hope not, but if it did, you know how the devil fish felt. That white fish was the parasite. Of all places it preferred to live in the throat of big sharks and devil fishes, sticking there and eating a little of whatever the devil fish ate as the food was being swallowed. So here was a little fish living in the throat of a big fish. Suppose you had a tiny little person living in the back of your mouth and eating some of everything you ate. I guess you would try to get rid of him too.

So the days went by, some were very quiet and some full of excitement. Paddlewings learned something new every once in a while, like the day he saw some silvery fishes which looked like lunch and caught

one by its middle only to find, when he twisted it around to gulp it down head first, that he would have to swallow a needle four inches long before he could swallow the fish. The needle was a long bill which such fishes have and I think it is used for just that purpose, to make the fishes hard to swallow. Why should a penguin try to act like a circus sword swallower when there are so many fishes in the sea?



SEA-BASS, CREOLE-FISH, TRIGGER-FISH & HIND CHANGING COLORS

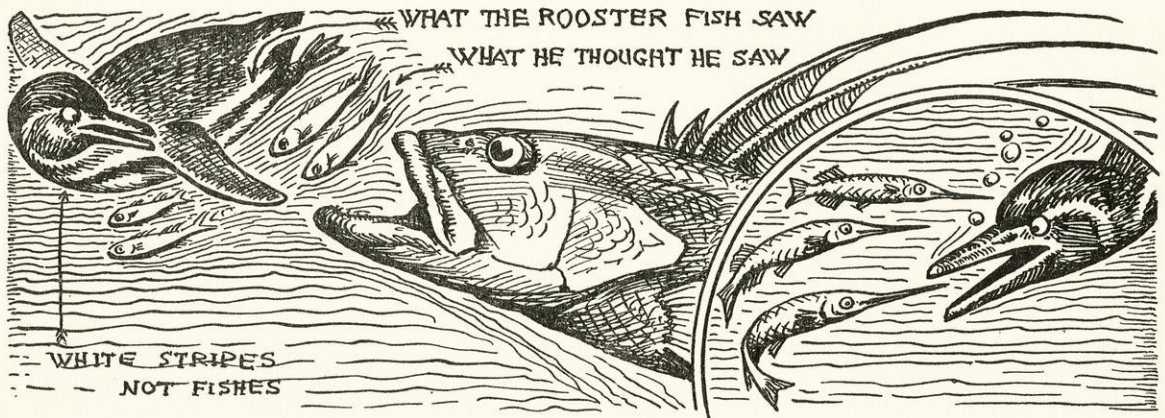


Chapter VII

HIS FIRST BIRTHDAY. HE GOES HOME AND FINDS A SWEETHEART. HE IS CAPTURED BY MEN FROM A SHIP

IT WAS coming close to Paddlewings' first birthday, nearly a year since he hatched in the cave at Tagus Cove. He woke up one morning not feeling so well. His feathers felt horrid and he had a poor appetite. This was the beginning of a new molt for him. He was to have a new coat of grown-up feathers, but he felt just as peevish now as he had when his down came off and his first grayish feathers came on. He stayed on the rock at the island marked Indefatigable, all the while the change was going on, losing some old feathers every day and gradually getting new ones until one fine day he was all rigged out in a new suit. It was his birthday present, beautiful, sleek, black on his head and back and sides, white on his breast with a neat white stripe down both sides. His gray bill had changed to black and yellow and his eyes had turned from greenish to reddish brown, and he felt fine.

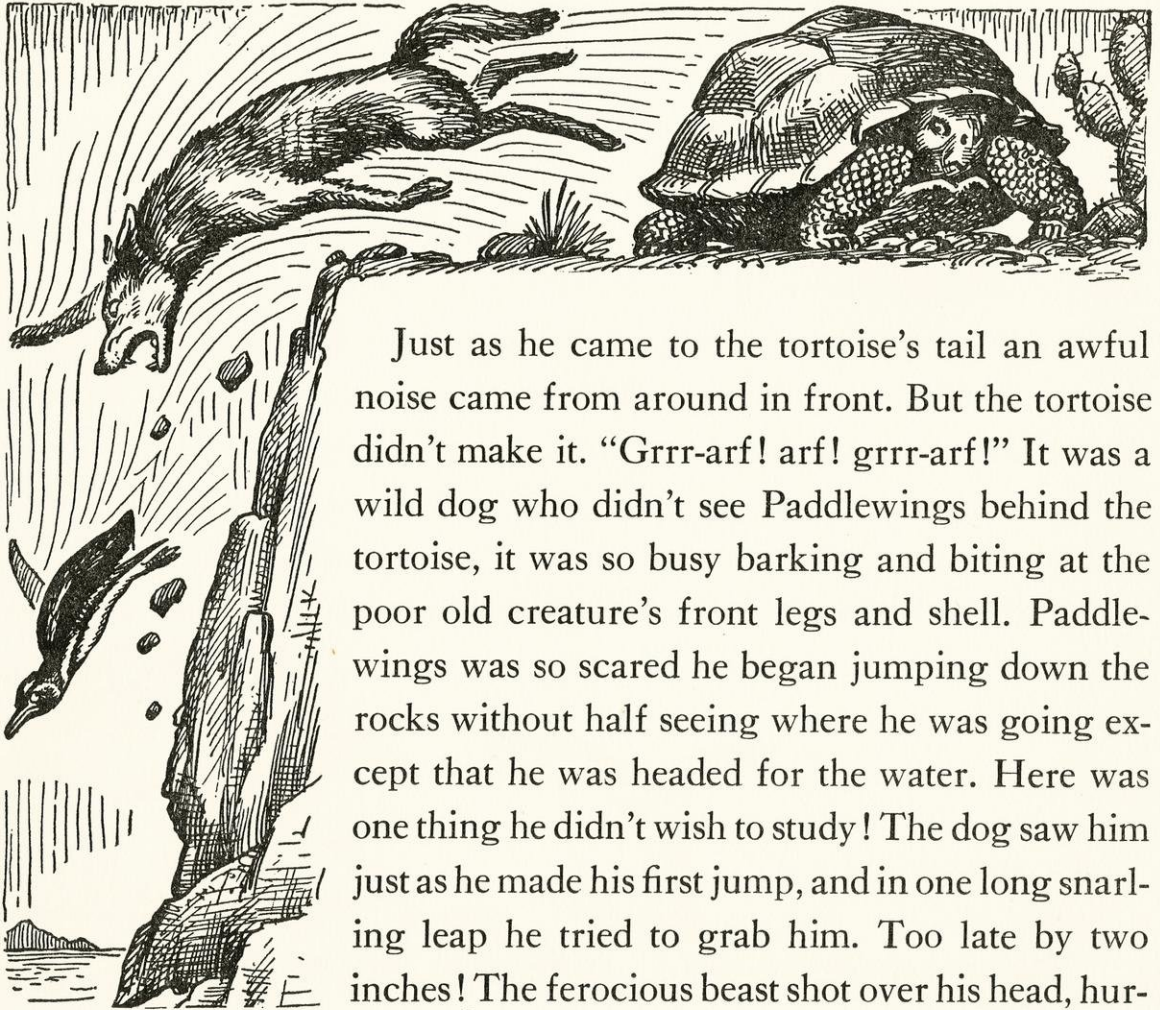
During his wanderings he had got used to being alone, but now he wished to be with other penguins. He was a grown-up bird at last and



he wanted other penguins to realize that. Perhaps a girl penguin would like him better than the rest. These were his feelings as he dived into the sea to go on a long hunt for Tagus Cove. Maybe he had a hunch which way to go, as homing pigeons do, for he headed westward. It took him several days to reach Albemarle Island, and on the way he found that the color of his new feathers helped him in catching fish. When he swam under water those new white stripes would flash, as they caught the light, almost as brightly as silver fishes flash in turning their bodies toward the sun. That way he fooled the silver fishes for they thought he was just a few more fellows like themselves. Once a great savage rooster fish, which sits on the dark bottom with its eyes looking out of the top of

its head, also thought Paddlewings was a school of sardines. He rushed up at Paddlewings and just missed him with a chop of his terrible jaws.

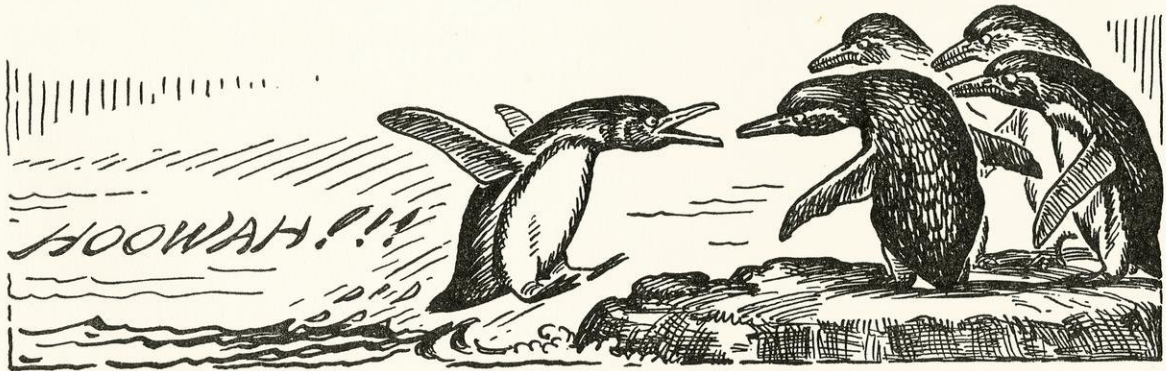
But he came safely at last to the island where he was born, though still many miles from home. After a long rest on the rocks he felt like climbing. Maybe he felt that he could see his way home better if he got up higher. Maybe he still wished he could fly. He jumped from rock to rock and ran up ledges to where the cactus and small thorny trees were growing, when he stopped suddenly, holding his wings up and his face far forward to stare at a gigantic tortoise. The tortoise, the first one he had ever seen, turned its head slowly to gaze sleepily at him. Since he always wanted to study every new thing he found, you know by this time what Paddlewings did as soon as he got over his surprise. He walked right up and tweaked the tortoise on the nose. "Hissss!" went the tortoise, jerking its head back into its shell and nearly pulling Paddlewings off his feet. Then, as he stood looking in amazement at the place where the head had disappeared, it came cautiously out again a little at a time. Back it went as Paddlewings stepped closer to take hold of the shell. Out it came as he walked around behind to see how this creature looked on all sides.



Just as he came to the tortoise's tail an awful noise came from around in front. But the tortoise didn't make it. "Grrr-arf! arf! grrr-arf!" It was a wild dog who didn't see Paddlewings behind the tortoise, it was so busy barking and biting at the poor old creature's front legs and shell. Paddlewings was so scared he began jumping down the rocks without half seeing where he was going except that he was headed for the water. Here was one thing he didn't wish to study! The dog saw him just as he made his first jump, and in one long snarling leap he tried to grab him. Too late by two inches! The ferocious beast shot over his head, hur-

ting down through the air and into the ocean in a great splash. Paddlewings dived in and swam beneath the surface to come up at a safe distance, and as he looked back he saw that thin, hungry wild dog scramble out of the sea and up the rocks, where it stood dripping, with gleaming eyes looking over the water at him, as much surprised to see him way out there as Paddlewings had been to see the dog at all.

On he went till that afternoon he swam into Tagus Cove, and sure enough as he neared the land, there were four other penguins standing in the sun. He could hardly get to them fast enough. His wings whirled through the water, he porpoised, and as a big wave washed up to the rocks he whizzed over it to land right among them with a loud "Hoowah!" It was his first "Hoowah." He felt as proud as a young rooster



when it first crows and very glad to be with these other penguins, who looked him all over closely like nearsighted tailors trying to see if his suit was a fit. They nipped him playfully with their beaks though I doubt if any of them knew just who he was. They were all young bachelors like himself.

That evening just before dark as they stood in a row drying after a swim, a mysterious vision appeared. What would a penguin think of when looking at a big white ship for the first time in his life? Maybe one of them supposed he saw a misplaced cloud as it came quietly into the cove. Perhaps another saw it as a white island with the smokestack for a tree trunk. But all five of them probably felt it was alive, some sort of a white whale. When the anchor was dropped they probably thought the grating of the chain was growling. And when two launches were sent out the penguins no doubt believed the whale had young ones. Wild men have made the same mistake so you could hardly expect wild birds to understand. Penguins look at a ship with eyes which expect to see whales and porpoises.

The two launches came from the ship to do two kinds of fishing, to catch big fishes on a line and to catch small fishes in traps. The fisher-

men were scientists from New York who wished to take them back alive to the Aquarium, so that millions of people could see how odd or how beautiful the creatures of Galápagos were. One fish-launch sped out of sight around a point of land, and the other ran around the cove, keeping close to shore, as two men looked for good places to set the traps. The traps were rather square and made of chicken wire with a door by which the fishes could go in but not come out. A long rope was tied to each, and on the other end of the rope was a wooden float which carried a small flag. When the men saw a good place on the bottom they dropped a trap overboard. The floating flag marked the spot so they could find it next morning.

The watching penguins saw the creatures who stood on two legs as they did, the biggest and worst-looking penguins imaginable. Hardly any bill, no feathers, no tails and making the silliest noises, like this:

“Oh, doctor! yoost look! pengvins!”

“Good! we’ll have to catch them in the morning!”

“Ya! I tank so!”

But the doctor and the launchman didn’t get up quite early enough. Paddlewings and his four friends took a look at the traps while the men

aboard the ship were dressing for breakfast, and they saw young sharks all about the traps. These had even forced their way into some, to eat the pretty fish who had gone in first. In one was a lobster. Sharks bother fishermen almost as much as they bother fisherbirds, at the Galápagos Islands.

The penguins inspected the launches and the underside of the ship till their curiosity was satisfied. Then, as if they had said to each other, "Come on, fellows, what's the use of hanging around here? Let's look for the ladies," they swam right out of Tagus Cove and headed for Narborough Island, where more penguins, especially lady penguins might be found.

They found more penguins, all right. Paddlewings' father and mother were there but he hardly noticed them, he was so busy looking for a sweetheart. The five young friends became enemies as soon as they saw the first lady bird. She sat on the rocks looking very nice indeed, and no sooner had they all hopped ashore than three of them began fighting about her. Paddlewings and the other young fellow stood by for a minute but soon went looking elsewhere along the shore in opposite directions. Paddlewings was more fortunate than the other young fel-



low for he soon found a pretty girl penguin. She stood watching the waves rolling over the rocks, but when he walked up she sat down as though she expected to have a very pleasant visit with this fine young fellow. He felt as proud as a peacock. Everything was going nicely and they would have probably decided to become Mr. and Mrs. Paddlewings if they had not been interrupted.

The other fellow hadn't found anyone and walked back till he saw



Paddlewings with his pretty lady friend. Instead of going by and minding his own business he walked up to Paddlewings and gave him a nasty peck in the face. Paddlewings did what any self-respecting penguin would do. He gave that fellow a wicked wallop with his wing. Remember, his wings were hard and strong and when he hit, it hurt. Then they went to fighting as hard as they could, pecking each other's faces, bumping their bodies together, banging each other with their wings, and stepping about very much like prize fighters. Sometimes it seemed as though the other fellow was going to win, but he began to be out of breath; and Paddlewings was just about to knock the stuffing out of him when they were suddenly stopped by a fish net. Its meshes were a queer kind of seaweed to them, far too tough to go through, though they tried frantically. The ship they thought was a whale had also come to Narborough Island. And while Paddlewings and his rival struggled to get out of the net, they heard the men they thought to be some homely sort of penguin shouting.

"I got 'em! Get that one too!" yelled the doctor.

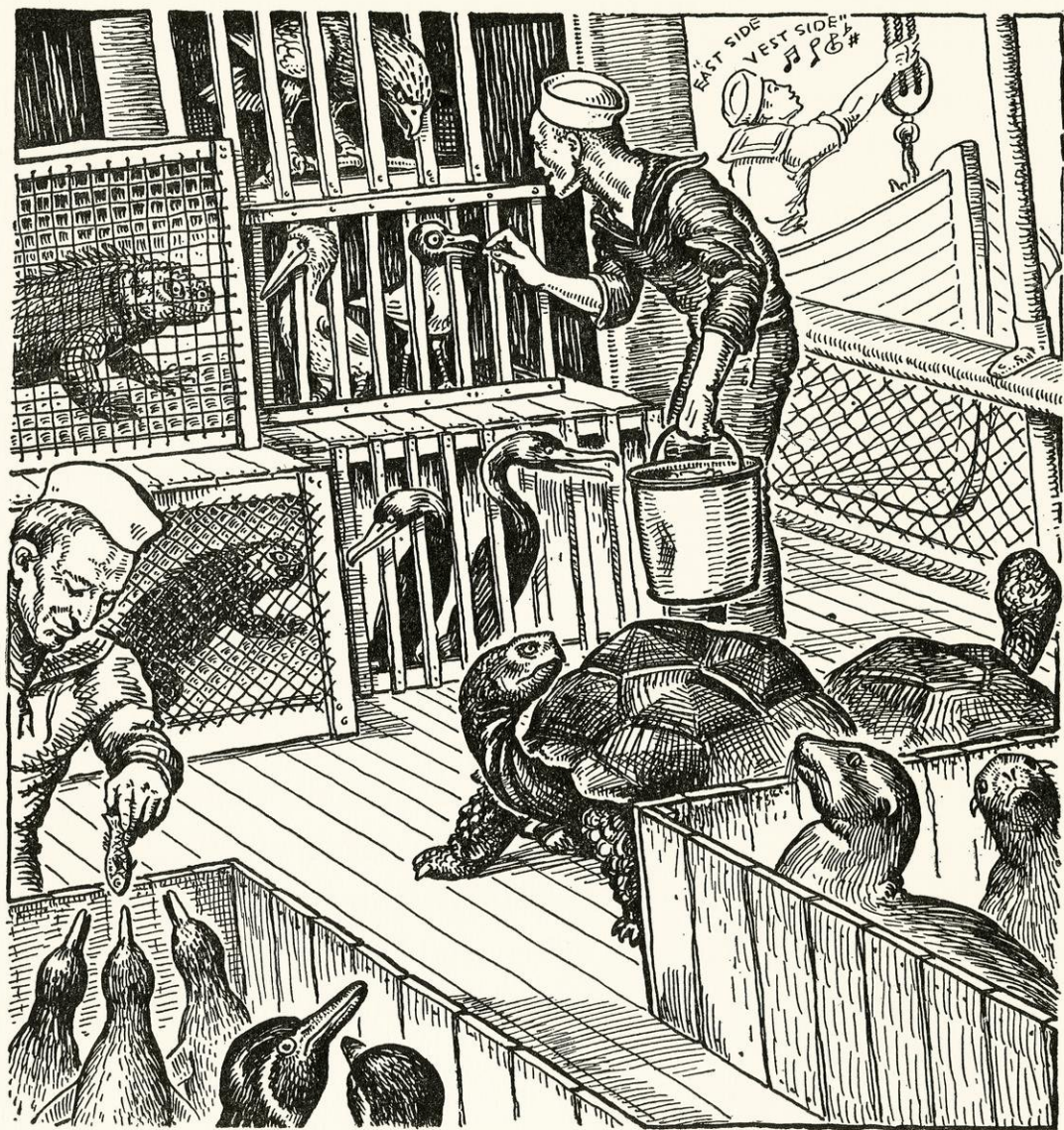
"Oh ya! She iss yumping all over!" answered a sailor as he sprawled all about the rocks trying to catch the girl penguin. She almost got out

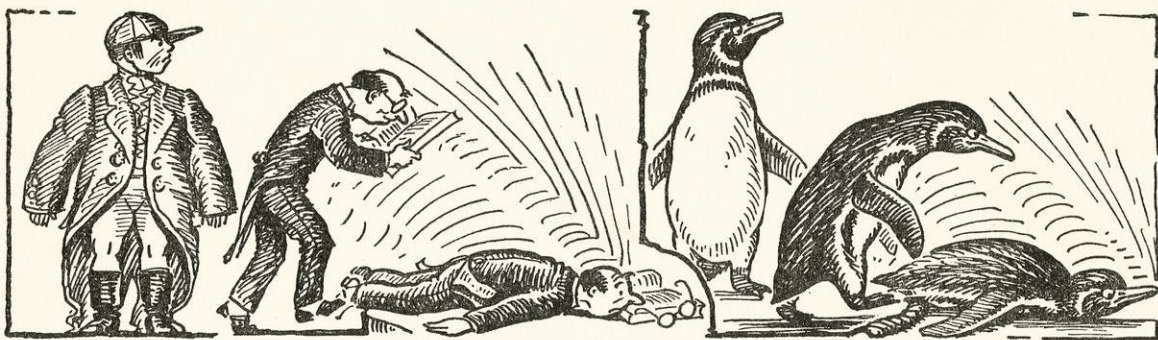
of his reach but just as she made one last jump toward the water he grabbed her and pitched in head over heels. But he held on to her with both hands and climbed up the rocks laughing very loudly, "Oh yiminy crickets, I don't know if I bane hunter or fisherman!"

So the three penguins were hustled into a launch and taken aboard the ship where they were surrounded by most of the men aboard. Strange to say, this did not frighten them much, for, though they naturally tried to get away when first caught, you will remember I said the wild animals of Galápagos are quite tame. When they found that no one of these big odd-looking creatures meant to do them harm, they began to feel at ease, and when a penguin feels at ease in a strange place he becomes all curiosity. The men allowed them to run all about the after-deck, where there were many tanks filled with fishes that had been collected for the Aquarium in New York. Then they took them to the upper deck where, to their surprise, they saw two more penguins who had been caught at Tagus Cove the day before. But not only penguins were there; there were sea lions, sea iguanas, sea turtles, land tortoises, land iguanas, hawks, gulls, boobies and cormorants in canvas tanks, wooden crates and cages. Paddlewings and his sweetheart, his rival,

and the other penguins were all put into a large box-like cage containing a tubful of water in which they could do their daily dozen at swimming. It was open at the top, since penguins cannot fly, and the sides were like a fence.

“Chips,” the ship’s carpenter, came presently, bringing little fishes for them to eat, but they were not much interested in food just then, so many strange things demanded their attention. From that time on Paddlewings and his rival forgot to fight over the girl penguin. It was pretty hot on the upper deck, but when the ship began to move a cooling breeze came through the cages. She was headed for Panama and from there to New York. All these animals and birds, whose ancestors had swum and drifted westward thousands of years ago from South America, were being carried eastward now on the back of a great white mechanical whale. The sailors kept looking into the cages and talking to the captive creatures, the scientists discussed them with the Commadore, deciding what was best to do for them, and an artist made many sketches of them. All day they sailed and all night. In the morning sailors flooded them with clean sea water, all except the tortoises and land iguanas.





At almost any hour that day you could have seen the Commodore taking some of the captives out of their cages to let them ramble about the ship for exercise. In the afternoon he came and took Paddlewings and carried him below to the lower deck where he was allowed to run about at will.

“Looks like a runaway baby,” said the Commodore. Paddlewings tripped over some rope that lay on the deck, falling flat on his stomach.

“Makes me think of a professor I knew who always had his nose in a book while walking,” said the artist.

“He’s wearing a coachman’s boots,” said a scientist.

“I believe he’s got the coachman’s coat on too, and it’s a bit large,” said another. By this time Paddlewings had discovered the library

door. It had a brass threshold a foot high to keep the sea water from washing in from the deck in bad weather. He made a jump, but the smoothness of the brass surprised him and he fell back onto the deck.

“Poor baby, not much like Galápagos rocks, is it, baby?” said the Commodore, giving him a little boost. Over he went into the library. He took it to be a big cave and a mighty nice one. Here was a good place to call in all the penguins, he seemed to think.

“Oowah!” cried he, much to the men’s delight.

“Oowah, ha ha ha,” laughed all of them and they must have sounded like a convention of penguins and laughing gulls to Paddlewings. There is a kind of gull whose cries sound just like people laughing. The Commodore turned on the radio, and some orchestra was playing “The Sidewalks of New York.” Paddlewings acted just as though he wanted to learn all he could about that since he was going there, for he hurried over to the radio and stood under it listening for all he was worth. Of course, the name of the piece meant nothing to him, but he was enchanted by the music. The men were rather surprised to see him show such pleasure in it. But love of music began millions of years ago when the first frog found his voice and charmed some female froggy.

Do you realize how much the deep notes of a saxophone sound like a bullfrog to this very day? Paddlewings didn't have to be a songbird to enjoy music. Dogs can't sing, yet some of them surely try when music is going. Mice like to build their nests in pianos.

I can't tell you everything that happened to the creatures on the ship, but you can see from this much that they did not have an unpleasant time of it. The only trouble, as far as Paddlewings was concerned, was that these experiences made him very restless. He was always wanting to be taken out to run around the ship in search of new adventures. As he watched through the slats of the cage he could see Chips come now and then to feed the other creatures. Chips would sometimes be getting ready to feed fishes to the sea gulls, and the cormorant would stretch his long neck out of the crate he was in, to steal half the meal which Chips had laid down as he opened the gulls' box. Once the cormorant reached out and bit Chips in the seat of his trousers! "Ow!" yelled Chips. "Scaup!" squawked the cormorant. Paddlewings could see the baby sea lions go for a galumphing gallop along the deck, and he felt like a boy who has to stay home when the other boys are going fishing.

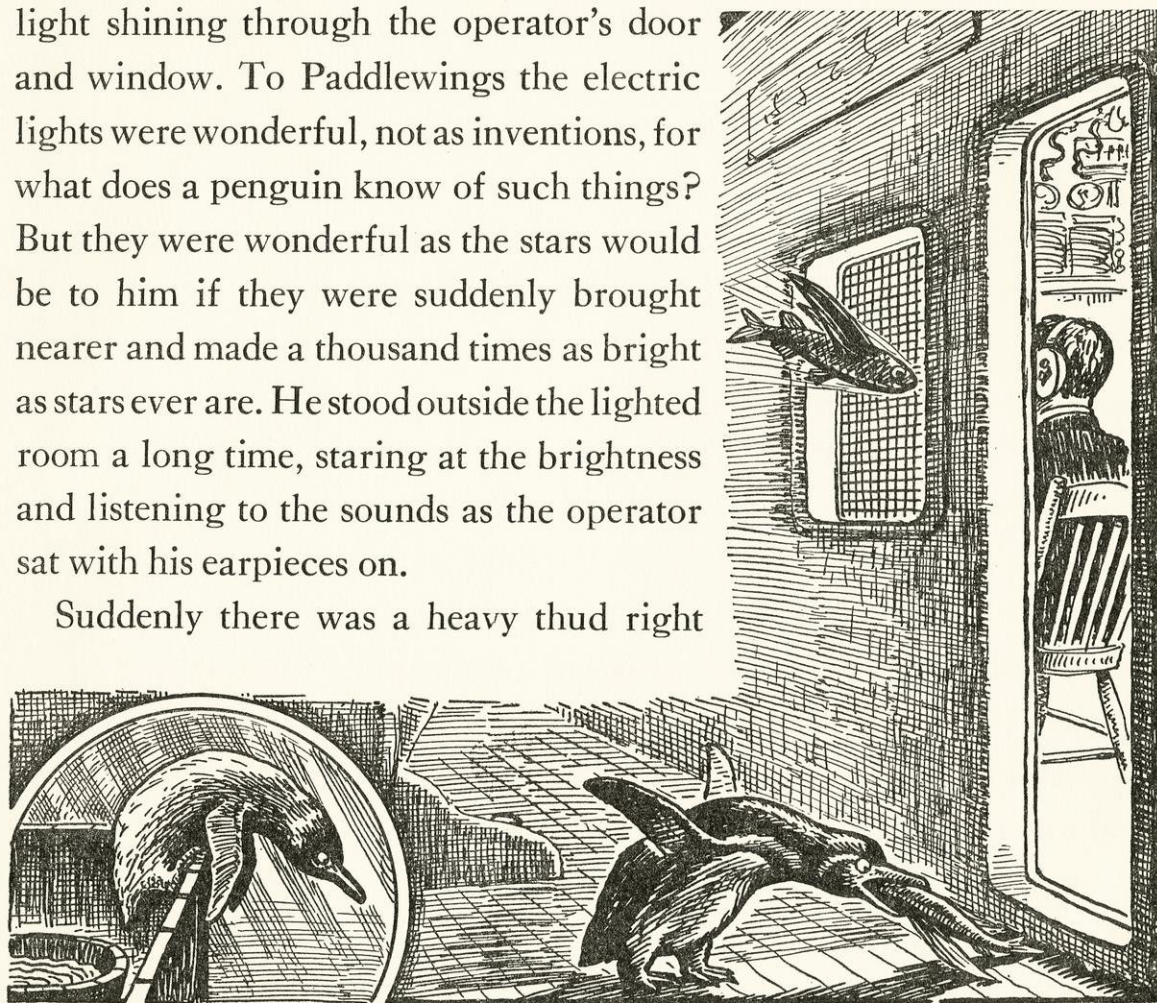
Chapter VIII

HIS ESCAPES. HIS RETURN TO THE SHIP AND JOURNEY TO NEW YORK

THE great white menagerie ship sailed on toward Panama, and just as night came on she passed some islands. They were not exactly like the Galápagos Islands, but they were islands just the same and a very good place to get off, Paddlewings felt. It was not much use to have those feelings though as long as one was locked up inside a high fence. However, after everything was dark he actually found a way to get out. He climbed up on the edge of the tub and from there, after trying a few times, he managed to jump to the fence top, over and down to the deck. By that time the islands were left far behind in the darkness, but Paddlewings was mightily pleased to be free to walk wherever he chose. It was after ten o'clock and everybody had gone to bed except the man way up on the bridge, steering the ship, a man on duty as watchman, who only came back among the animals once in a long while, and the wireless operator. Paddlewings could hear the buzzing and singing of the radio apparatus, and he walked eagerly up the deck till he saw the

light shining through the operator's door and window. To Paddlewings the electric lights were wonderful, not as inventions, for what does a penguin know of such things? But they were wonderful as the stars would be to him if they were suddenly brought nearer and made a thousand times as bright as stars ever are. He stood outside the lighted room a long time, staring at the brightness and listening to the sounds as the operator sat with his earpieces on.

Suddenly there was a heavy thud right

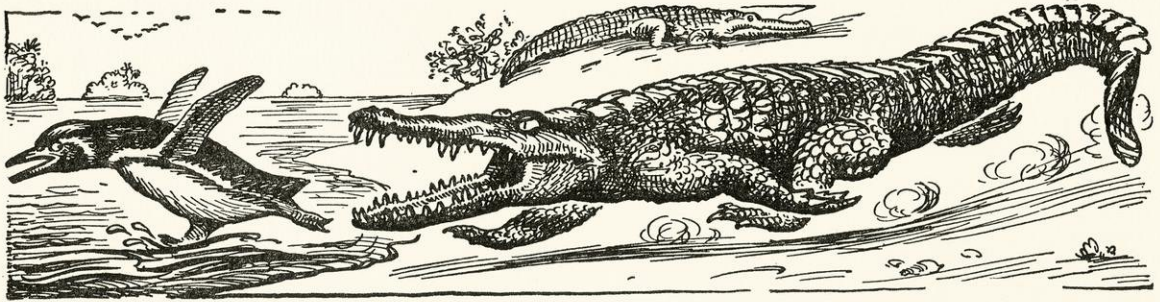


above his head and almost at the same instant something fell flopping at his feet, something he had always wanted. A flying fish had been attracted by the light and came hurtling toward it through the night air only to bump its nose on the radio operator's window. Paddlewings greedily grabbed the flying fish, twisted it about and swallowed it with a feeling of "at last I've got you!" No sooner had he swallowed it than another foolish flying fish did the same thing. This time the wireless man heard the thud, for he had removed his earphones. He jumped up from his seat to see what had made such a noise and saw Paddlewings making ready to swallow the second fish. The sudden appearance of the man in the door gave Paddlewings quite a start; he forgot that no one had ever hurt him and merely remembered that he was out of his cage and free to go where he pleased. Because he



was startled, and because he desired to keep free, he ran from the door, under a lifeboat to the very edge of the upper deck. As he stood there the wireless man, with a flashlight in his hand, jumped at him from behind the lifeboat. But he didn't catch him, for the frightened penguin leaped into the dark with his head down, diving deep into the black water far below. Next morning the radio man told the Comodore what had happened, while Paddlewings was already walking ashore on one of those islands he had seen as night was falling. You can see them on the map fifty miles west of Panama, marked Perlas or Pearl Islands.

Paddlewings stood on a sandy beach preening his feathers after the long swim in the dark, and feeling very pleasant. Overhead he saw big flocks of seabirds flying forth to do their day's fishing. There were countless cormorants, but unlike the ones at Galápagos, they could fly. Long lines of pelicans passed, some high above, some so low that the tips of their great wings just missed the smooth surface of the sea as they skimmed along. Not far off two large logs lay half sunken in the water. To his surprise they presently swam out and crawled up on the beach. They were two crocodiles, twelve feet long, about to take a



sun bath. When the nearest one saw Paddlewings he put off his sun bath to take a walk, intending to walk right over and crunch him down for breakfast. To the penguin the crocodile was an enormous iguana, and remembering how unfriendly the land iguana had been, he was not at all pleased to see this tremendous lizard with those terrible teeth coming toward him. He edged nearer to the water as the crocodile crept



closer until it suddenly made a rush for him, at which the terrified bird sped into the water. The wicked old crocodile was pretty fast in the water himself, but he wasn't as fast as Paddlewings who was shooting along beneath the surface toward one of the other islands where he hoped there would be no crocodiles!

These islands were close together, and it took him two minutes to reach the nearest one, where more strange things were to greet his eyes. As he walked on the sand a black bird, who also walked, came up to him nodding her head almost like an iguana and saying, "Wark, wark, wa-a-ar-rk." She seemed to be a pretty good sort of a bird to Paddlewings, but when he put out his bill and moved toward her she jumped into the air with her feathers all sticking out, screaming, "Cuddah-cut!" She was a little hen and belonged to a family of negroes who lived there. When they heard the hen cackle, a dark brown boy and girl came running from among the palm trees which grew all about, and they shouted with delight on seeing Paddlewings, catching him quickly up. Their island home was made of grass and poles on a hill back among the trees, and here they ran with Paddlewings to show him to their father, mother and big brother.

“See what we have found!” they cried in Spanish. “*Mira la que nos encontramos!*”

“Good!” said the father. “That is a queer bird. Shall we take it to market with the parrots to-morrow?” “*Bueno! La cogemos para la maqueta con los loros mañana?*”

“Yes, yes! *Si, si!*” said the children.

And so the next morning early Paddlewings started once more for Panama. Only this time he wasn't in a great white ship but in a dugout canoe which the father of the children had cut out of a very big log, just as you might whittle a small boat out of a stick. The whole family went, father paddling in the stern, big brother in the bow, mother taking a turn now and then at paddling or sitting with the two youngest children in the middle of the canoe, holding onto the bird cages. These all held parrots except the old one in which was Paddlewings who wasn't at all comfortable. It was a long trip to make in a canoe under the blazing sun. The parrots squawked and scraped with their rasping voices, and the poor penguin longed to jump into the water he saw all about him and cool his hot dry feathers. Once in a while one of the children would scoop up a



dipper of water and pour it over him, but he soon was as badly off as ever.

It was late afternoon when the canoe finally touched the land at Panama. Here the father borrowed a pushcart and loaded the birds onto it. Up through the narrow twisting streets of the town they went toward the market, where you can find almost anything for sale—all kinds of food, baskets and bags, clothing, sandals, hats, goats, parrots, monkeys,



looking-glasses and sewing materials. If Paddlewings had not been a penguin he would probably have fallen asleep on the floor of his cage, but tired as he was he could not help being interested in all the strange things going on about him as they passed along the streets. So much noise! Street cars, automobiles, carriages with shouting drivers, lots of pushcarts like the one he was on, men talking, ladies laughing, old women trying to sell lottery tickets, women with bundles on their heads; and everywhere more children, white ones, black ones, brown ones, yellow ones, red ones, all playing together in the streets. Bootblacks and knife sharpeners, and people speaking many languages from China, India, Spain, France, United States and Panama jungle. You can imagine the hubbub.

When they reached the market it was nearly closing time, but the father set up his cages anyway, hoping to sell at least one bird before the day was all over. The family went to sleep at the home of a friend, but the father slept on a blanket beside the parrots and Paddlewings. Next morning bright and early he fed the parrots and splashed a pail of water over the penguin. He offered Paddlewings some scraps of fish from the table of a fish vender, but they were not the least bit appetizing. He brought a



crab and some shrimps, but Paddlewings was beginning to feel most unhappy in the old bent parrot cage amid all the racket and confusion which started as soon as the market opened.

However, good luck was on its way. While the father was trying to sell a parrot to someone, who should walk into the market but the Commodore, a scientist and the artist! They were spending a few days seeing the sights around Panama, and of course, they had to see the market before they went on to New York. They thought they might buy a few more animals to add to the zoo already aboard the ship.

“Will you look here!” exclaimed the artist to the Commodore and the scientist. “What is the meaning of a penguin in Panama?”

“How the dickens did you get here?” said the scientist as he bent down to look at Paddlewings carefully. “Where from?” he said to the father.

And the father who understood a little English, answered "Perlas."

"I'll bet it's the one that jumped overboard," said the Commodore excitedly, "it's the same kind, isn't it? Anyway we are minus a penguin and so we're going to buy this one!"

They took him back to the ship where he was really glad to be, after the troubles he had had since his escape. There, with the other penguins and Galápagos creatures all about, Chips fed him and put new water in the swimming tub. Even while this was being done the ship started through the canal, and by the end of the day she was sailing in the old Atlantic Ocean, heading northward for the city of New York, two thousand miles or more away.

The farther north they went the cooler became the weather, until the sailors had to put all the animals into a big shelter they rigged up out of canvas. They even had to put an electric heater in there too. It soon turned out that too many creatures were crowded into the shelter, so the penguins were put downstairs in the artist's bath-tub. This was too steep and slippery to jump out of, but it was a fine place to keep warm and wet. That is the way Paddlewings arrived in New York, one cool April morning. The iguanas and tortoises were taken to the big zoo, but the

cormorants, gulls, fishes, and penguins all went to the Aquarium where they are to this day.

Paddlewings likes the Aquarium pretty well, for the penguins live in a big pool which has a platform in the middle where they can climb about and from where they can see the fishes swimming in the great glass tanks all about them. They even see the fishes from their own Galápagos Islands, for there are the Fatheads and the Bumpheads and the many kinds with yellow tails. To Paddlewings the Aquarium is like the inside of the cave where he first pipped through his shell one day way back in wild Galápagos, and if you go there you can watch him practicing all the smart swimming tricks he learned in the tidepools when he was just a baby with his first crop of feathers.

