A CHAIN OF EVENTS

SEASIDE AND WAYSIDE

BOOK ONE

by

Julia McNair Wright

Then Nature, the old nurse, took
The child upon her knee,
Saying, "Here is a story-book
Thy Father hath written for thee."
— Longfellow *to* Agassiz

YESTERDAY'S CLASSICS

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PREFACE

THIS series of Nature Readers is intended for the use of beginners in reading. The subjects chosen and their treatment have been alike subordinated to this object. The Nature Readers are not offered as textbooks in natural science, but rather as a contribution to the idea that facts of real and permanent value may be made known, a noble taste may be cultivated, thought may be developed, and the initiatory steps in an increasingly popular study may be taken, while a child is learning to read a certain number of English words.

Should not the first short, strong Saxon sentences be used to convey scientific facts rather than such trivial information as,

"The boy has a new hat," or, "I had a plate of green corn to eat on the fourth day of July"?

Lessons fresh from the seashore and the field, where life is seen, not in an abnormal state, as captivity, but in its own chosen homes and natural development, cannot fail to have an educative power of great value, even to minds of a very early age.

The real difficulty to be overcome has been to put these simple lessons concerning the habits, homes, and anatomy of certain animals into such words as are usually found in the most elementary reading-books. To accomplish this, so that the series shall reach the hands for which it was intended, has been the author's chief concern. There is happily no uncertainty as to the scientific accuracy of the work. Every substantive statement has been verified by the observation of the author,

or of those whose competency for such work is unquestioned. The practical value of this series of Nature Readers must now be tried in the homes and the schools.

Whether the pages have been discreetly broken into paragraphs to catch restless and unaccustomed eyes, whether the words and subjects have been fitly chosen, whether the individuality and personality given to irrational animals shall succeed in attracting the interest and fixing the wandering thought of childhood, are all questions rather to be answered by a trial of the book than argued in a preface.

We bring no cat and dog stories, no tales of monkey antics; but we have endeavored to impress upon the little heir of life, in one of its highest forms, a comprehension of life, and a reverence for it, even in some of its lower manifestations.

This object has already been kindly commended and generously welcomed by no small number of skilled teachers and scientists, who have given valuable time to the reading of manuscript and proof of this series.

To those parents and teachers who will give the books a careful trial, and reinforce these simple instructions by their own enthusiasm and experience, the Nature Readers are commended by

THE AUTHOR.

TO THE BOYS AND GIRLS

Do you know that there are cities on your path to school, and under the trees in your garden? Do you know that homes with many rooms in them hang in the branches above your head? Do you know that what you call "little bugs" hunt and fish, make paper, saw wood, are masons and weavers, and feed and guard and teach their little ones, much as your papa and mamma take care of you? This sounds like a fairy story, but it is a true fairy story.

In this book you will read of some of these wonders. And when you have read this book well, you shall have two or three more.

These books will not try to tell you all that there is to tell of these things. They

are only to wake up your minds, so that you will think and study and notice these things for yourselves.

Your eyes will be worth many times as much to you as they now are, when you learn to observe with care and to think about what you see.

J. M. N. W.

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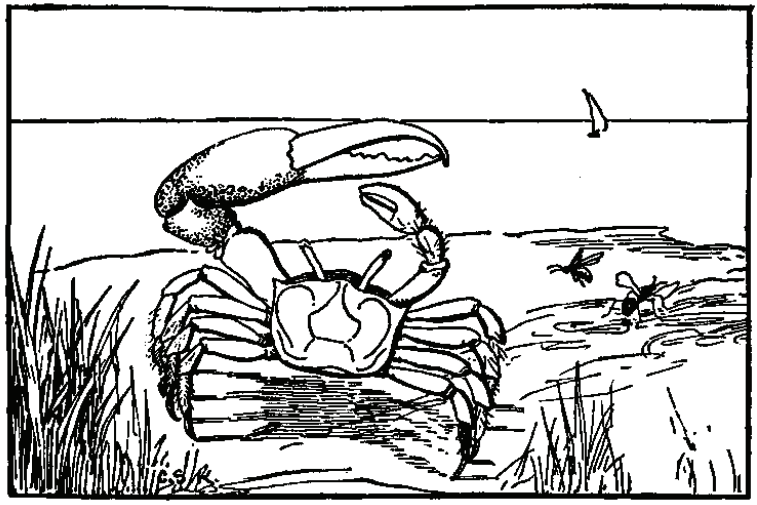


Mr. Crab

LESSON I

MR. AND MRS. CRAB

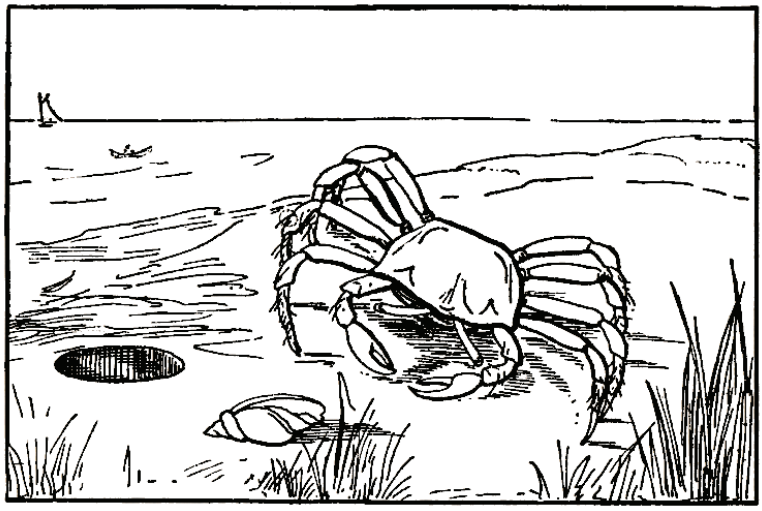
This is a picture of Mr. Crab. He lives in the sand by the seaside.

Mr. Crab has a smooth, flat shell on his back. He has eight legs and two hands.

One hand is large; the other hand is small. He fights with the big hand, and takes his food with the little hand, or with both hands.

Mr. Crab digs out his house in the sand. He makes a place for a hall, a bed-room, and a pantry.

Do you see the round hole? It is the doorway of his house.



Mrs. Crab

Mrs. Crab does not dig. Both her hands are small and weak. She gets food to put into the pantry.

She never fights. If she is in any trouble she runs home, or to a hole in a rock.

See what queer eyes! They are set on pegs; some call them stalks. The crab can push out the eye-pegs and pull them in.

Would you not look odd if you could make your eyes stand out six inches?

When crabs go into their houses, they draw down their eyes and tuck in their feet.

Crabs are of many colors. They are red, brown, green, yellow, and blue. The claws are often of a very bright color.

The color on the shell is less bright than on the claws; it is in small dots. The color on some kinds of crabs is in lines.

No crab is clear, bright red when it is alive. When it is boiled it takes a fine, red hue. Why this is no one can tell.

LESSON II

MR. CRAB AND HIS HOUSE

The water of the sea comes and goes in tides.

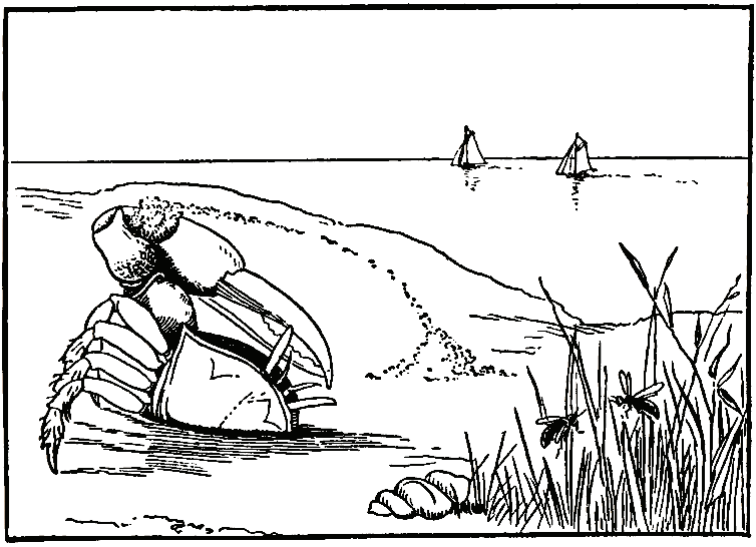
The water rises twice each day.—That is high tide. The water goes back after each high tide.—That is ebb tide. Each tide lasts six hours.

When the snow melts in the spring, or when much rain falls, the water rises high

in the brook. In the dry, hot days the water is low in the bed of the stream.

If the stream or brook were full and low twice each day, the change would be like the high and low tides of the sea.

When the tide is low, Mr. Crab digs out his house. He scoops out the sand with his big claw. Then he folds his claw to carry the sand, as you can carry grass or leaves on your arm. Some kinds of crabs carry the sand in three of their feet, bent to form a basket.



Mr. Crab makes his House.

Mr. Crab takes the sand to the top of his hole. Then, with a jerk, he throws the sand into a heap.

Mr. Crab is very strong. He can lift and carry things larger than his body.

He digs out a long hall. He makes rooms in his house.

Then he goes with his wife to look for food. They keep near their home.

Crabs eat flies, gnats, ants, lady-birds, and other little insects. They eat seaweed also.

When beach-flies light on the sand or on seaweed, the crabs jump at them, and catch them as cats catch mice.

But the cats do not move so quickly as the crabs.

Mr. and Mrs. Crab put the bugs they catch into their pantry.

For six hours, while the tide is high, they stay in their house; and while they stay in the house they eat insects and seaweed they have stored away.

Mr. Crab acts as though he knew about the tide. He knows when it will be high over his house. He knows when it will be low, so that he can come out.

LESSON III

MORE ABOUT MR. CRAB

It would take a year to tell all the odd things about Mr. Crab.

Where are your bones? They are inside your body. Your bones are a frame to hold up your soft flesh.

Mr. Crab's bones are on the outside of his body. His bones are his armor, to keep him from being hurt.

Look at his hard shell, he has no other bones.

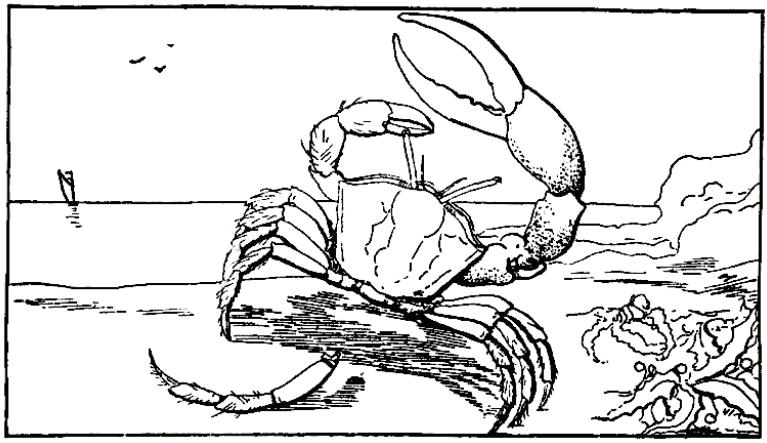
He can both walk and swim. You can live only on land. The crab can live and breathe either in water or on land.

Mrs. Crab lays eggs. A hen, you know, lays eggs, one by one, in a nest. She keeps them warm till the chicks come out.

The crab's eggs are put in a long tube or sack. Mrs. Crab does not leave them in a nest. She carries them tied on her legs, or under her body.

When the small crabs come out of the eggs, they grow very fast.

When you catch a crab by his arm or leg, he will pinch you, if he can, with his big claw. If you do not let go, he drops off this arm or leg, and runs.



Mr. Crab runs away.

Could you run with one leg gone? The crab has legs to spare. Then, too, his legs will grow again. Yours would not.

A crab's leg, or hand, will grow again very soon, when one has been lost.

If his eye-peg is cut off, it takes a whole year for a new eye to grow. I think he knows that; he is very careful of his eyes.

The eye-pegs of one kind of crab are very long. He has a wide, flat shell. There is a notch in each side of his shell. He can let his eyes lie in that notch.[1]

How can he do that? His eye-pegs are so long that he can bend them down flat to the shell and keep them safe in the notch.

LESSON IV

MR. AND MRS. CRAB GET A NEW COAT

YOUR skin is soft and fine. As you grow more and more, your skin does not break. Your skin gets larger as your body grows.

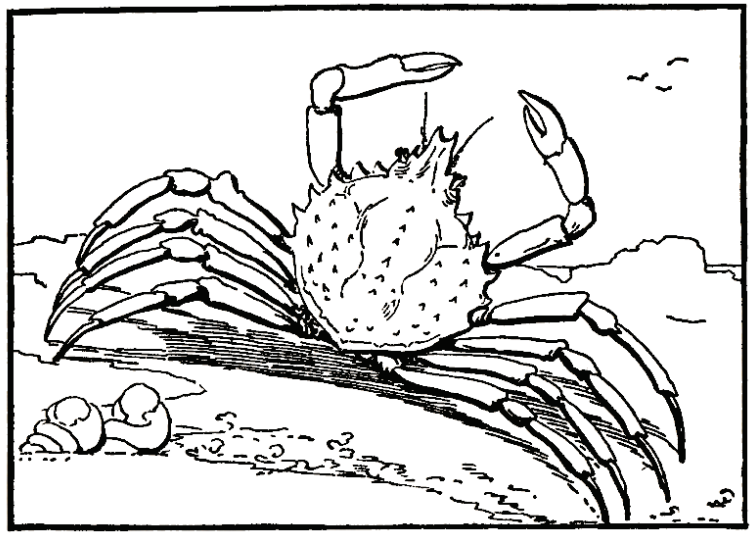
Mr. Crab is in a hard shell. The shell will not stretch. It gets too tight, and what can Mr. Crab do then?

[1] See picture in Lesson IX.

What do you do when your coat is too small?

Now I will tell you a strange thing. When Mr. Crab finds that his shell is too small, he takes it off, as you take off your coat.

He pulls his legs, his hands, and his back, out of his shell. He does that in his house in the sand.

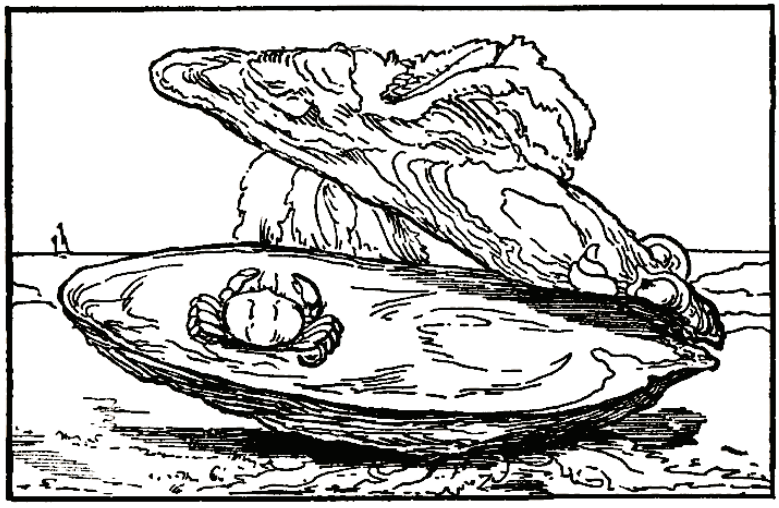


Spider Crab

You do not undress out of doors. You go to your room. So does Mr. Crab.

Mr. Crab slips out of his shell. He pulls out his feet and hands, as if he took off his

boots and his gloves. Then he is a poor, soft, cold thing. But over all his body is spread a skin, soft as paste, like glue and lime. In a few days it gets hard. It is as big as Mr. Crab, and just fits his shape. Here is a good, new shell!



Little Pinna Crab

When crabs get new shells we say they moult. This shell has the right colors—blue, brown, red, or gold. It has spots and rings.

When Mrs. Crab changes her shell, Mr. Crab stays near and tries to keep her from being hurt.

The young crabs have to change their shells often, they grow so fast.

Crabs that live in dark mud have dark brown or green shells.

Some crabs have sand-colored shells[2]—pale gray or brown shells, with close, fine specks like sand on them.

There are more kinds of crabs than you could count. They live in all parts of the world. This book tells you of only a few of them.

LESSON V

WHAT THE CRAB DOES

The crab is quick to get cross. Are you? He likes to fight. In that he is like a bad boy.

When Mr. Crab sees some other crab near his house, he is angry.

Then he stands high on his toes. He pulls in his eye-pegs, for fear they will be hurt. He spreads out his big arm. Now he is ready to fight!

He runs at his enemy! Each tries to hit

[2] See Lesson XXXIII.

the other with his big claw. This big claw, or hand, can cut and pinch hard.

Sometimes one crab cuts off the hand or leg of the other crab. Or he bites the shell on his back.

Sometimes you may find on the beach crab shells with the scars of these bites or cuts.

If only a leg is cut off, the crab may keep on fighting. But if his hand, or eye, or back shell is hurt, he can fight no more.

He runs home to hide, until a new eye, or hand, or leg can grow. If your hand is cut off, will it grow again? No, it will not.

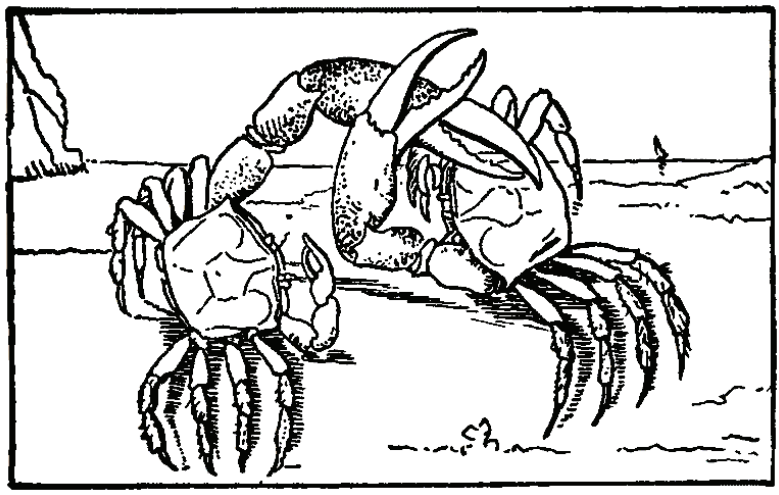
When Mr. Crab has lost a leg or hand, and a new one grows, it is small at first. When he gets a new coat, the new hand or leg becomes half as large as the one he lost.

With the next new coat, the new hand or leg comes out the full size it should be.

When a crab is afraid, he runs home. He is very brave, and does not much fear other crabs.

He fears birds most; for birds eat small crabs; and the crab cannot fight a big bird.

Swing a rag over a crab's head. What does he do? Up fly his eye-pegs! Up comes his big hand! There, he has caught the rag!



A Free Fight

He will not let go. You can lift him into the air by the rag; still he holds on.

Once I saw a blue crab catch a dog's tail. The crab held on fast. The dog yelped, and ran up and down the beach. We had to catch the dog, and pry open the crab's claw.

Let us look at this crab; he has let go the rag, and has gone to dig in his house. Lay

this bit of shell on his hole. See it shake! He has run up and hit it with his head.

Now he waits. Watch well. What will Mr. Crab do next?

There, the shell flies up in the air! He struck it hard as he ran, and made it fly up.

I have seen him try twice, and make the shell shake before he found how hard he must hit, to get it out of the way.

Some folks think he shuts the door of his house with his big hand. I do not think so.

He knows that the tide will wash a lump of sand over his hole, for a door. The tide shuts him in.

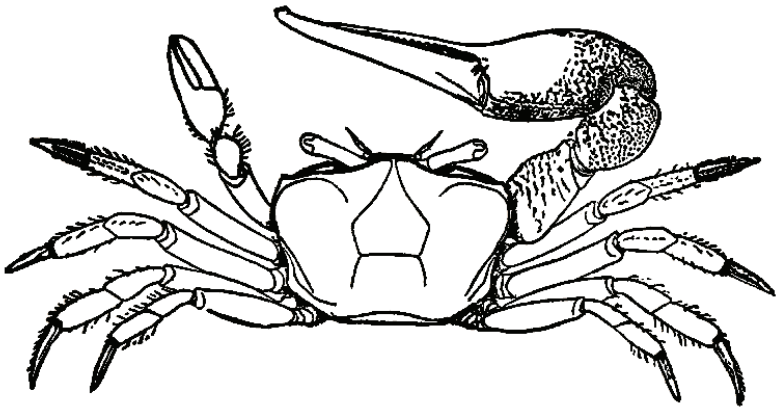
The crab watches the waves come nearer as the tide rises. At last he jumps through his doorway, for he knows that the next wave will close it.

He never stays up one wave too long. He gets in in time. He is shut in his house with Mrs. Crab. He knows that the tide will pass, and he has bugs to eat.

LESSON VI

MR. CRAB AND HIS FRIENDS

THE crab that has one large claw has many names. Some call him the Fighting Crab, he is so cross.



The Fiddler Crab

Others name him the Calling Crab, because, when he runs, he holds his big claw high, as if he called, "Come! come!"

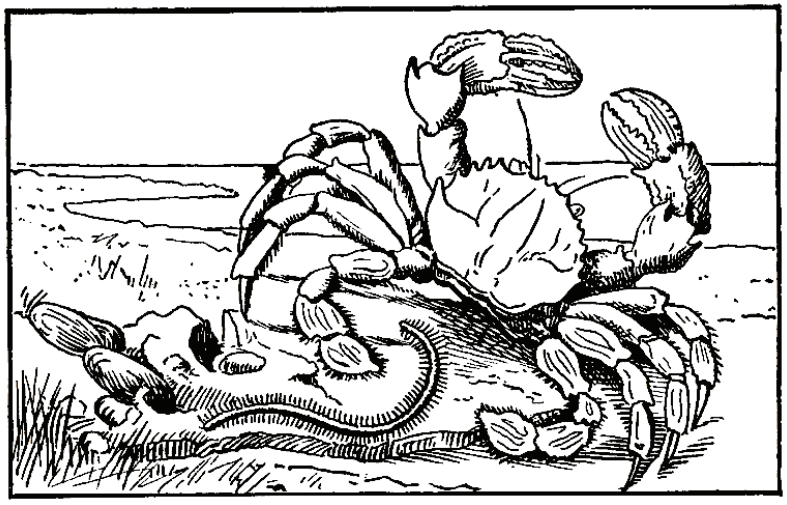
Most people call him the Fiddler Crab, and say that his big claw is his fiddle.

I think Fiddler Crab is the best name for him. He can, and does, play a tune on that hand. It is his violin, as well as his hand, his spade, and his sword.

Do you see a row of little knobs on the inner edge of his big claw? He rubs those knobs on the edge of the shell that covers his back, and the sound is his tune.

He uses that tune to call his mate. Mrs. Crab thinks it is a fine tune.

Mr. Crab has friends upon the beach, as well as down deep in the sand and in the water.



Mr. Crab and Some of His Friends

When he walks along the sand, he meets big flies with two wings. He is glad to see them. Why? They put their grubs, or young

ones, in the sand, and Mr. Crab knows that he can find them to eat.

Mr. Crab also meets a great, green tiger beetle. He does not fight with him. He knows that he shall find the beetle's grubs in the sand and eat them.

More Friends of Mr. Crab

While he is digging down below, he meets a little fat, round crab, with big eyes, and a thin, gray shell. He is glad to see him.

If Mr. Crab has not food enough to eat while the tide is high, he will creep along in the sand, and catch and kill this small crab for his dinner.

Mr. Crab also meets, deep down in the sand, long, green, red, or brown worms. They are making houses for themselves. He does not trouble them.

Out in the sea, Mr. Crab finds some small shell-fish called limpets. He likes them so much that he lets them live on his shell. They take fast hold on his back, and he does not pull them off.

LESSON VII

SOME OTHER CRABS[3]

All crabs are not alike. There are many kinds. They differ in shape, color, and habits.

Some are not at all pretty. Some are very pretty. All are very strange.

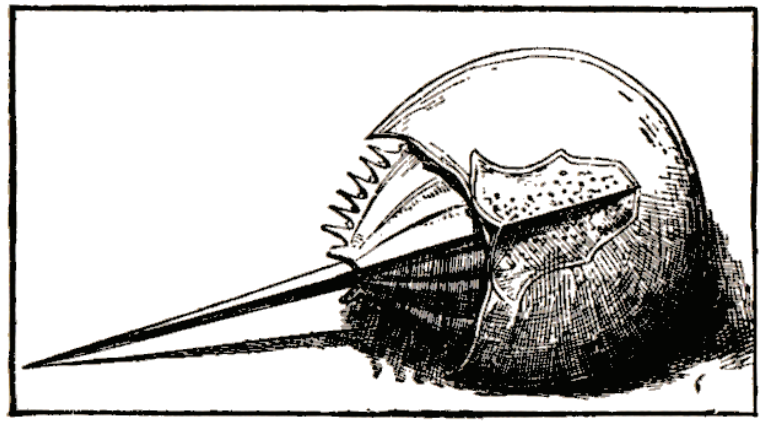
The Spider Crab[4] has long, thin legs. The front of his shell, which is over his head, is not wide, but is a sharp point. This is to help him dig his way into sand and mud.

[3] See illustrations on pages 2, 9, 10, and 21.

[4] See picture in Lesson IV.

Some crabs do not make a house in the sand; they live in holes in the rocks.

The Horse-Shoe Crab is of a chestnut color.



Some call him the King Crab. Look at his picture. His shell is of the shape of the hoof of a horse, but it has a long tail, with sharp points on the edges. The tail is as hard as wood, and has edges like a file.

The Horse-Shoe or King Crab lives in sand and in mud. He chooses the muddy banks where rivers or streams run into the sea. He pushes his way in the mud, with his big, round shell, and scrapes the mud out with his many feet. He eats the worms he finds in the sand and mud.

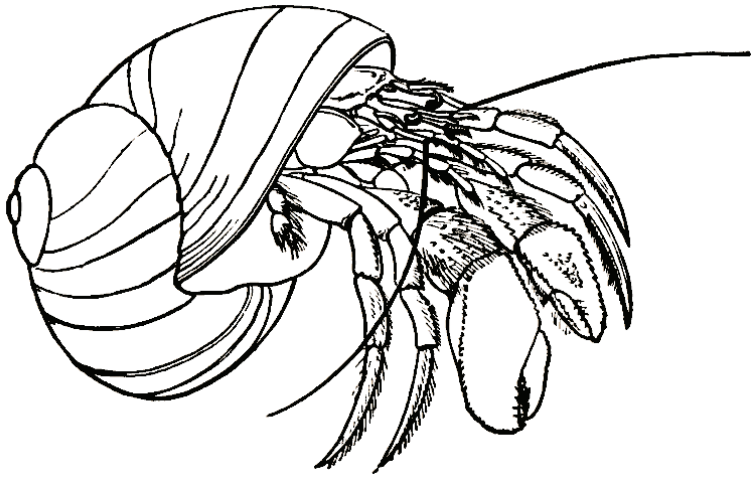
Why are the worms down there? Like Mr. Crab, they build a house in the mud. Some time I will tell you about these worms.

Now and then, as Mr. Crab goes along under the ground, he finds in his way a long, soft thing that looks good to eat. It is the long pipe or tube with which a clam takes his food. The King Crab puts out his claw to get it. The King Crab can move his hand claw as quickly as your cat can strike with her paw. But the clam is far more quick than the King Crab, and shuts his shell down on the King Crab's claw. Now is he held fast, like a rat in a trap!

The King Crab waits to see if the clam will let go. No, he will not. Then the crab drops off his claw, and goes away to hide while a new one grows.

Do you see, in the picture, a crab in a shell made like a curl? That crab steals his house. He finds an empty shell, and goes into it to live. It is odd to see him run, with the shell he stole on his back.

How does this crab live? By fishing. All crabs hunt and fish. I have told you how they hunt on the sand for bugs and flies. Did I not tell you how they hunt for grubs and worms under ground?



The House He Lives In

How do crabs fish? Mr. Crab gets into a good place to fish. He pops out his eyes to see all about him. Then when things that he likes to eat float by, he strikes out with his big hand.

He catches what he wants nearly every time, he is so quick. Crabs are very greedy; they spend much time eating.