FAIRY ROADS TO SCIENCE-TOWN

By Mary Earle Hardy

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M. BARTON
"As soon as the Lady Moon trims her lamp, we glide out of the shadows."

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BY

MARY EARLE HARDY

Author of "The Hall of Shells," "Sea Stories for Wonder Eyes," "The Little King and Princess True," "Nature's Wonder Lore," "Little Ta-wish, Indian Legends in Geyser Land"

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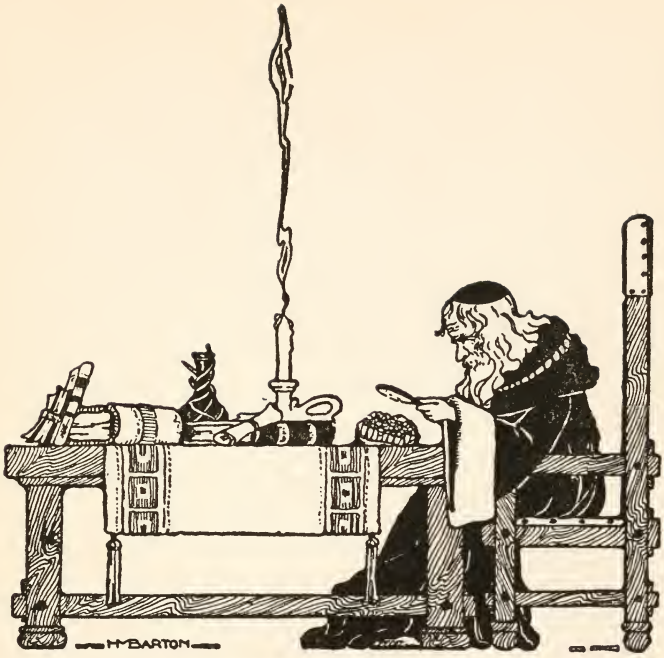


CHAPTER I

LITTLE BUILDERS IN MUD

O for boyhood's painless play,
Sleep that wakes in laughing day,
Health that mocks the doctor's rules,
Knowledge never learned of schools,
Of the wild bee's morning chase,
Of the wild flower's time and place,

. . . . . .

Of the black wasp's cunning way,
Mason of his walls of clay,
And the architectural plans
Of grey hornet artisans!

J. G. Whittier.

FAIRY ROADS TO SCIENCE-TOWN

LITTLE BUILDERS IN MUD

IN the fragrance of a dewy morning a little king sat on the steps of his castle making willow whistles. Three gallant knights he had for company. One was a merry minstrel. He could whistle like the wind when it blows into chimneys, he could sing like a troubadour and his laughter was the sweetest music of all. Another was a dreamer of dreams, and in his dreams there were always arches and domes and towers. The third was likely to be a king himself some day. Indeed, though true knighthood is enough for any man, all had noble kingdoms awaiting, which should be theirs as soon as they had won them.

Out upon the steps where the royal party sat

making whistles came a maid of honour from the castle hall. "Sure, it's the wasps that will be the death o' me!" she exclaimed; "and it's meself I shall see with both o' me eyes put out! Me tidy woodhouse is niver a place for wasps to be sticking their mud!" And in an instant the wasps' mud walls, the result of weeks of skilful and loving labour, were gone.

The young king picked up the broken wasp-nest and carried it to the Merlin of his court, who was sitting on a balcony near with other knights of the Table Round. With careful hands Sir Merlin took the pieces of clay and examined them closely. "Little adobe dwellings," he called them. The young king and his knights put their willow whistles in their pockets and fell to studying the little dwellings and

"The black wasp's cunning way,
Mason of his walls of clay."

These dwellings, Sir Merlin showed, were little rooms whose doors were sealed, and in

each room a baby wasp was lying. Beside the infant wasps lay food for time of need. Sir Merlin showed that these rooms were nurseries where baby wasps were kept from harm. As each cell was finished the mother wasp had laid her egg therein, and placed beside it provisions for the time when the baby wasp should arrive at an appetite.

Together Sir Merlin and the knights opened one door after another, and in every little chamber was found a wasp's egg or grub, and beside it a spider, not dead but paralysed into helplessness. Curious enough, in this case each cell held a spider of a different sort. Had it only happened so, or was each of these wasp babies to be fed on different diet?

"I think I have heard it buzzed in a bee tree that all the bees were not to be fed alike," remarked a thoughtful knight.

Sir Merlin glanced quickly and with keen pleasure at the youth who had used his ears and eyes as he travelled through the King's

forest. "Right true, Sir Knight," he answered. "You have come upon a goodly secret. It is true that food given to the grubs which are to develop into queen bees is different from that which is eaten by the ordinary grubs; and in the Fairyland of Bees common working grubs may be changed to princesses by giving them royal food."

But even the wise Sir Merlin could not tell whether the wasp mother had only chanced upon different kinds of spiders for each cell, or whether she felt a preference for some of her babies and, with far-seeing wisdom, planned each should come out into the world fitted for a different station.

"Why aren't the spiders killed? And how were they made to lie so still?" inquired one interested knight.

"If the spiders were dead," replied Sir Merlin, "they would be unfit to eat before the baby wasps were hatched and ready for their breakfasts, so the little witch of a wasp with a


—H.M.BARTON—
"One day I was watching a wasp build her house."

single magic stroke"—he could not quite tell how—"made them powerless to move, and pushed them into the round towers."

"I've seen it done!" exclaimed the young knight, who had dreams of domes and arches and towers. "One day I was watching a wasp build her house; I wanted to see how she shaped her cells and rounded her domes, and how she smoothed her walls. She flew to the river bank near by and there she worked in the clay until she had moistened and kneaded enough to make a pretty big load for such a little builder. Then she carried it to the barn and fastened her bit of clay upon a rafter, where she had begun a nest. After she had plastered it down and finished the cell, she smoothed and trimmed it, as I have seen a mason smooth and trim his mortar."

"These wasps are sometimes called mason wasps," explained Sir Merlin, looking with interest from under shaggy brows.

"She kept at it until she had finished a cell

like one of these, joined to others, like the nest we have here," continued the knight. "Then she stood off and looked at her work on this side and on that, and acted well pleased with what she had done.

"I thought I had seen the thing through and went off. But in the afternoon, when I just gave her a call to see what she might be up to, I found her on the window-sill below where her nest was fastened. She was trying to carry a young miller up to the nest. The miller objected and fought as well as he was able. But Madam Wasp said he'd got to go; so she tugged one way and the miller pulled the other, flapping his wings till the wasp must have felt she was in a young whirlwind.

"After working for some time Madam Wasp apparently concluded it was too big a job, for she laid the miller down and I thought she was going to give up beaten; but that wasn't her plan. She just gave the miller a

poke or a sting, I couldn't tell which, and he made her no more trouble.

"Again she started to fly up to her nest with her load, but the wind caught the wings of the miller and again I thought she was beaten. But she just laid the miller down and snipped off his wings; then, quite easily, she carried him away to her nest and crammed him into the cell she had made and sealed up the door. I have had some opinion of wasps since that time," concluded the young knight thoughtfully.

Just as he finished his story the maid of honour appeared again at the door. A look of dismay was upon her kind face.

"It's them wasps again!" she cried. "And sure, I niver dreamed that they had hearts in 'em, to grieve the like o' this!"

The party followed her to the woodhouse, and there, upon the beam from which the little adobe dwelling had been torn, clung the mother wasp, evidently mourning for her

home and family. Her wings were drooping, her head hung motionless. She was a picture of distress, and her sorrow could not be mistaken.

CHAPTER II

STORIES FROM THE GREAT SEA'S WONDER BOOK

This world, my little shipmate,
With all the wonders in it,
Compared with God's great universe
Ain't bigger than a minute.

But this the message thrilling
The dear earth through and through,
The great God guides each atom
As if He'd nothing else to do.

STORIES FROM THE GREAT SEA'S WONDER BOOK

"WHAT'S the prettiest thing you've found this time, little Ship-Mate?" said Captain Harcout, standing shoe deep in the sea-sand and bending over a little girl and her half-filled basket.

"O Captain! they are all so pretty and some of them are so queer," the little girl answered, looking up with a happy smile into the dear bronzed face that bent over her.

To the people up at the house among the pines the little girl was Emily; but Captain Harcout had held her against his breast when she was a wee pink-cheeked baby and, with something like sea-fog in his eyes, he had said, "A pretty small skipper to be tumbled about in Life's sea! I'm nothing but a rough old sea-dog, but I'm bound to keep 'longside, and

I'll stand twixt you and the breakers, and I reckon we'll make port. How's that, little Ship-Mate?" The baby looked up into the kind storm-weathered face and smiled, and her small fingers clutched in his shaggy beard. So "little Ship-Mate" she was to him ever after.

Just as the little Ship-Mate set her basket down at the Captain's feet, a tiny jet of water came up through the sand close to Captain Harcout's shoe. "Oh, oh! what's that?" she exclaimed with a laugh.

"Well, now, just let's find out," said the Captain. "S'pose you dig down with that little spade you've got. We may give some seafaring chap a surprise."

The little spade had not dug far when it threw a clam shell up with the sand.

"That's the fellow that saluted us!" said the Captain. "And do you see this little trail along in the sand? It stops just where you found him. Mr. Clam's been taking a walk.

Likely he'd been out to a tide-pool after his breakfast. He's a secret society chap and won't be telling us where he's been, nor what he's going to do next."

The little Ship-Mate looked puzzled. "Why," she said, "that's only a shut-up clam shell. *That* can't walk. Oh, Captain, you are just joking."

"You'd think his foot was a joke if you could see it!" said the Captain. "Fact is, he's pretty much a joke himself, for he hasn't any head! What do ye think o' that?" and the old Captain's laugh was in time with the roar of the sea.

"He don't 'pear to need any head though, for this little shore-man knew the minute your spade struck into the sand, before it touched him, and he shut his double doors quicker'n you could say Jack Rob'son. He knew, because, ye see, he has such a fine system of nerves."

"These two shells ain't the little chap at

all," explained the Captain, who was as interested as his little Mate in anything that lived in or about the sea. "These shells are just his protecting walls; they are the house he lives in. He made it himself, and I say, he's done a pretty fine job. You can tell how long he's been about it by counting the rows or ridges on the shell. Each ridge marks a year. He and his relations have been given a long name,—*Mollusca*—which means soft-bodied animals. And if we want to be a bit more particular and personal we might call the clams *Acephala,* and that means 'without a head.' "

"Honest true! hasn't this clam—haven't any of the clams got heads?—honest true, Captain, haven't they?" asked the little Ship-Mate to whom the Captain's statement seemed altogether unbelievable.

"Nary a clam that has a head," the Captain answered slowly. "Pretty queer, ain't it? Yet there's more that's queer about these same

clams. There be folks that's a heap wiser than your old Captain, who tell us that they've found this headless little brother-clam has eyes, and ears, and a heart whose pulsations they have been able to count. Now there's a puzzle for us!"

"Oh, Captain, *are* clams so wonderful as that?" exclaimed the little Mate. "And they wouldn't have eyes and ears if they couldn't use them, would they?" she added wonderingly.

"Looks that way, don't it?" said the Captain, wondering how he could explain to his little Ship-Mate some of the mysteries of the great deep,—mysteries of which even the wisest know so little. "Fact is," he said, "we folks think we know a heap,—and so we do,—but when we get to prying into the life and secrets of these little sea-farers, we find we get into pretty deep waters. We've learned a few things about sounds that some of the sea-folks make. We've learned, too, that sound travels

clear and plain under water, and that sounds travel faster under water than in the air, but our ears ain't made for that kind of element; yet I, myself, have ducked my head down under water careful-like and have heard some of the mysterious goings-on down in the depths. I've caught plain as day little clicking, chirping notes, like one calling and another answering. It wasn't in the English language, that's true enough. We know that there are certain fish that make sounds and I reckon they ain't the only water-folks that do some talking in their own peculiar fashion. Least-wise this is a pretty wonderful world, with enough for us to study into to keep us all busy and out o' mischief. But let's get back to solid sand and to things we are sure of," said Captain Harcout with a laugh.

"We know that clams all have mouths, and that they eat for a living. The mouth of a clam is pretty nigh to its foot. Queer anatomy, ain't it? But you see, little Mate, it

won't do for us to set ourselves up as patterns for all creation to follow; and if Mr. Clam can do any thinking without a head, likely *we'll* be the ones *he* thinks are queer. And if he hasn't got a head, he's pretty wonderfully made, just the same. That's the way with all the works of the Great Creator. He don't throw out any poor jobs.

"Now about that little squirt of water we saw a bit ago. In the clam's soft body are two small muscular tubes which the little chap has power to extend or to draw in. It's the business of one of these tubes to draw in sea water, and the business of the other to throw out the water after all the food, and air for the gills or breathing organs, and the lime for building have been taken from it. One of those little siphons, as those tubes are called, threw up its jet of water just in time for us to take notice.

"That's the little fountain-maker's story. Leastwise, it's part of it. I have to own up there's some points Mr. Clam's a good deal

better informed on than I am, and I'd like to ask him a few questions myself." And the old Captain's eyes were as full of interest and his face of questions as those of his little Ship-Mate.

"Now let's go down the beach and give the little chap a chance to plough his way back into the sand. You won't catch him opening his doors again while he has a notion that anybody's watching."

Slowly they sauntered along the beach, stopping often to investigate some strand of seaweed, a shell or piece of a crab's claw,—so like scraps from torn pages of the Great Sea's Wonder Book.

"Do please tell me, Captain, what those queer snaky things are yonder in the water," said the little girl. "I know they are not snakes, but they float about and wiggle in the waves as if they might be."

"Ah, ah," said the Captain slowly. "Many's the folks that have been fooled by

queer things in the sea, and thought they saw the original old sea-serpent after 'em. Not saying, mind you, that there be'n't enough such looking things in the sea.

"But these—these aren't snakes. These are mighty pretty things. Just let me show ye." And stepping down into a sea trough as the waves rolled away from the shore, he reached out with his cane and brought to land one of the long, floating, coiling mysteries that truly suggested sea-serpents as they tumbled about in the waves.

"Now just let us sit down on this stretch of sand, and do a bit of investigating.

"See, this is a long string of little disks or pockets. Just spread your handkerchief down on the sand. We'll open this disk and see what is inside. Here's one that's begun to pop open already.

"There! Did your two eyes ever see anything prettier than that?" he asked as out of the little disk or pocket dropped several tiny

pointed shells, scarcely as large as a pin head. They lay white and shining on the little handkerchief, bright as pearls in the sun that touched them for the first time in their lives.

"Oh! Oh! Oh!" exclaimed the little Ship-Mate, her eyes big with wonder and delight. "Why, they are baby shells! Oh, my! they are just like this big shell I have here in my basket, only they are so weenty-teenty—most smaller than nothing!"

The wise old captain watched the little girl's face, so full of delight and surprise, then he said, "But I want you to see how perfect every little shell is. They couldn't have been trimmer nor prettier if every one of 'em was a dozen years old. The old Mother Fulgur that you've got there in your basket ain't a bit more perfect.

"Those long, snaky looking things ye see are whole lines of little crafts asailing into port, and every one of them is full of pretty emigrants like these in your handkerchief. In

other words"—the Captain added by way of explanation, as he saw the puzzled look in the blue eyes that studied the baby shells—"in other words, every one of these long, snaky things is a row of little cradles for baby Fulgurs. Fulgur is the name of this kind of sea shell, whether big or little. That's their family name, so to speak.

"First there were tiny eggs in the water hidden in a tough and gummy line of a sort of slime. The waves were pretty rough with them. But I reckon that was just what was good for them, for the slimy line grew long and strong in the tumbling sea—grew tough and expanded till it got to be like this. As soon as the baby Fulgurs are old enough to begin roughing it in the sea, the edge of each little pocket or disk opens, and away the babies sail—just millions of them. A pretty rough time some of them have, and the wonder is that any of them live to grow up, for the whole sea is full of hungry mouths waiting

to catch and swallow them. Mighty pretty, though, ain't they?" And the Captain took the larger shell from the basket and compared it with the baby Fulgurs just tumbled out of their sea cradle.

"I'd like to have you get a chance to see Madam Fulgur take a walk," he said; "and if you got close enough you might see her shoe, her little slipper, so to speak," and the Captain laughed heartily at his own fancy.

"That little shoe serves a sort of double purpose, though I s'pose its chief office is to be a kind of door to shut Madam Fulgur into her house when she wants a little privacy.

"But let me tell ye, little Ship-Mate, the foot and stomach of Mrs. Fulgur are so close together that ye might about as truthfully say the little traveller crawls along on her stomach. That's what the wise ones have found out, and they call such sea folks *Gasteropoda,* which means 'stomach-footed.'

"I tell you what we'll do. We'll capture a

good sized, live Fulgur, and take it up to the house, and put it into a glass jar filled with sea water. Ye'll find as soon as it gets to feel a bit at home, it will be crawling around and walking up the sides of the glass jar. Then through the glass jar you can make your observations without in the least disturbing it.

"That will give you a fine chance to see the loose folds that ruffle out under the shell. These folds constitute the mantle, as it's called; and the mantle is an important part of Mrs. Fulgur's organism,—in fact she couldn't keep house nor even live without it. You will find that although she is such a small housekeeper and generally keeps out of society, she is most carefully and wonderfully made. She has gills or lungs to breathe with, a heart, digestive organs, eyes, a mouth,—yes, and teeth,—not just the human kind to be sure, but some that serve her better."

"Oh, my! My! My!" exclaimed the little Ship-Mate. "I never s'posed they were

wonderful like that. I never thought there was much to them but their pretty shells. And, dear Captain, I wish you would tell me how they got their shells, and how they make them bigger."

"That's it!" exclaimed the Captain, "that's a thing worth knowing. That mantle you are going to see when the Fulgur goes up the sides of the glass jar is about as wonderful as anything I ever noticed. It's with that mantle that the Fulgur makes its shell. The mantle is provided with little glands that give out a kind of sticky, gummy substance which quickly hardens, and with this—film over film—the Fulgur makes its shell, and enlarges its walls.

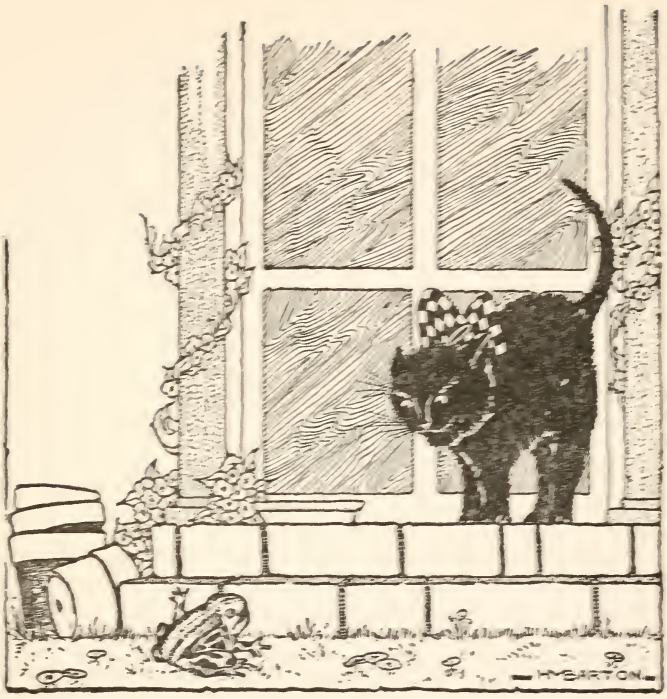
"We may reasonably reckon, too, that even a little Fulgur has an eye for beauty and aims after perfection; can't doubt that when we see the fine decorations on the outside of its shell. The little paintpots for this decorating are in the edges of that wonderful mantle

I've been telling you about. The inside of the shell is smooth and shining as silk to be comfortable to the soft, sensitive body of the Fulgur.

"Bless my stars! As sure as I'm asailing, here's a big Fulgur walking straight toward us! I reckon he'll feel it an honour to go up to the mansion and live for a while in a globe of sea water and demonstrate how Gasteropods are made and what they can do."

As soon as the Captain's fingers touched the shell, so sensitive is the animal within, the Fulgur stopped, drew its mantle and foot up into the shell and shut the door—as quick as a wink.

Captain Harcout picked it up and dropped it into his little Mate's basket, and the three went together up the hill to the house among the pine trees.



CHAPTER III

WARTY

"Yes, Mr. Toad's my special friend, sir,"
Timothy the gardener said.
" 'Ugly' was it that you hinted?
That's because you're not acquainted.
Usefulness, you know, sir,
Better is than show, sir,
And besides, I've heard it said,
He has a jewel in his head."

WARTY

"I MEAN to be a naturalist," announced Jack one morning.

"Good!" exclaimed Dorothea, his cousin. "Right here is a subject for you," and she pointed to a toad that had just hopped out from under the doorstep. "See how those jewels in his head are regarding you. I wouldn't wonder if *he* were studying *you*.

"And here is another subject for you. Tell me, if you can, how that soft worm over there can bore into the hard ground. Mr. Naturalist, you are in luck! It isn't every student that can have his lessons put before him as easily as this."

"But I don't intend to spend my time on toads and worms," Jack answered. "When the time comes I am going to distant countries to learn about strange and unknown crea-

tures or to dig for the bones of those now extinct."

"I know of a great naturalist who thought it worth his while to spend much time studying earthworms in his garden," said his father, looking up from the paper he was reading. "The world isn't in the habit of revealing its secrets to those who do not first show themselves worthy in the places where they are put. Come, I will give you till the end of the summer to learn what you can about this neighbour who lives under the doorstep. If your report is worthy of your subject, I will give you the 'Natural History' I heard you wishing for this morning."

"Jupiter!" exclaimed Jack, "I'll do it, Father, if I get warts all over my hands!"

During the summer the family were made aware of various stages in Jack's investigations, and Dorothea declared that Jack was back with old Pharaoh and had toads in his bed chamber.

At length there came a day when winter locked fast with a key of frost all the dwellings of the little people that burrowed in the earth and lived under doorsteps. Then it was that Jack came to his father and said:

"Well, Father, Warty and I have to part company for a while; and I am ready to report what I have learned about him and his relatives:

"I find toads very interesting; in fact, one summer isn't long enough to master my subject. I have studied living specimens mostly, but I have had help from other sources, for I have read everything I could find with the word 'toad' in it.

"Wise men have thought toads of so much importance that they have given them a very long name. But my particular specimen has learned to answer to the name of Warty. The name is appropriate, and he likes it. The proof of this is that he has learned to come when called by that name.

"Early in our acquaintance Warty disappeared. I feared I had lost him, but I learned from books that it is the habit of toads to make trips in early spring to some pond or river where their eggs are laid. I went to our pond to see the eggs for myself. At first they look like strings of a jelly-like substance. The masses and strings increase in size and in egg-like appearance, until at last young tadpoles are hatched. The tadpoles of toads I found to be blacker and smaller than those of their green, long-legged cousins, with whom they live until their tails and gills are lost. When they really become toads, they leave the water and seem to forget that it was ever their home.

"I had known Warty for some time before I learned that he could make a sound. One night in June I heard a low, happy trill that seemed to come from down near the end of the doorstep; but when I brought a light to investigate, the sound stopped. I suspected

Warty, though, and made up my mind if he had anything to say I'd hear it.

"Not many nights after I was paid for all my listening. But this time I heard a wild, clanging little hiccoughing kind of a noise. It sounded like an outcry of alarm or distress, repeated so fast as to give the little thing no time to breathe. I hurried to bring a light. There was my toad. He was too excited to notice the light; in its glare he never so much as winked, but his poor little inflated throat throbbed fast with his cries of terror. There was Dorothea's black kitten, with an unmistakable grin on his face as he kept striking Warty with none too velvety paws. The puffy body of the frightened toad looked like a bag of wind, and with my light on the off side I didn't need the X-rays to make visible Warty's backbone and some other things that were in the wind bag.

"I took the toad's part pretty quick, and dismissed the cat. Little by little the throbbing

throat and the puffy body grew natural, and soon Warty ventured away in the darkness.

"The next step in my education came when I surprised Warty taking his early breakfast. A light shower had softened the ground and brought earthworms to the surface, and he was attempting to swallow a long angleworm. The worm didn't mean to be swallowed, and as it wriggled and twisted I reckoned Warty would have to get something else for his breakfast. But by quick jerky motions of his neckless head the toad gained on the worm; his little 'hands' were handy in catching and holding it and pushing it into his big mouth. So Warty had his breakfast and the worm was 'taken in.'

"For closer watching I brought Warty into the house and put him in a high window box. At first he seemed disturbed at being handled and his rough and clammy skin grew damp and sticky. This exudation, I have read, serves as a defence against his enemies, and

"I brought Warty into the house and put him in a high window box."

has given rise to the stories about a toad's spitting poison, etc. But kindness reassured Warty and he soon grew quiet and confident.

"Not long after being brought into polite society Warty proceeded to undress, or rather to take off his old suit and come out in a span new one. He used his 'hands,' rubbing and pulling until the old skin was worked off and the new skin was seen shining and fresh with wart and spot. He got rid of the old skin by swallowing it.

"While I was obliged to furnish his three meals a day, I found his appetite and digestion rather remarkable, and I do not wonder that English gardeners have offered twenty-five dollars a hundred for toads to rid their gardens of insect pests.

"Instead of toads being poison-spitting, wart-producing and evil-eyed, I find them shy, gentle, inoffensive, even affectionate and useful. In winter they bury themselves in the ground and lie in a dormant state. Some

toads have been known to live for nearly half a century. I suppose Warty has now begun on his five or six months' nap, and I hope no black cat may disturb his dreams."

Jack paused, extended his hand and exclaimed, "And I haven't a single wart, sir!"

"Very good, Jack, my boy," said his father. "All summer I have watched your investigations with an interest equal to your own. You have learned many things, and one is that we do not need to travel far to find subjects that repay careful study. You deserve your book, and here it is!"

CHAPTER IV

THE LITTLE MEASURING MAN

Come up here, O dusty feet,
Here is fairy bread to eat.

. . . . . .

And when you have eaten well
Fairy stories hear and tell.

Robert Louis Stevenson.

THE LITTLE MEASURING MAN

"HO! I'm being measured for a new dress. One, two, three! How much will it take, little Geometer?" and the tall lady sat very still while the Measuring Worm looped off the inches on her dress.

At her smile and her words two little maids left their castles in Spain and came to see this new wonder. Worms to them were very horrid, but they forgot all about that as they watched this one slowly travelling down the front of their Aunt Esther's dress. They could not help being interested as they saw the queer little loops it made in the middle of its back as it industriously measured off the inches.

"When I was your size," said the lady, nodding toward the two little maids, "I always liked to find one of these measurers going over

my gown, for I was told it meant that I was to have a new dress, and that the fairies had sent their little measuring man to find out how much cloth it would need."

The two fair heads bent nearer. That this was "the Fairies' Measuring Man" compelled interest, and they began to see that it was not horrid at all. Even the household Sunbeam, the baby, who had not yet learned to think of anything as "horrid," left the blocks he was piling, and with wonder in his big blue eyes watched the queer little measurer and wanted to take it up in his fingers.

Right in the midst of its measuring the worm stopped and stood straight up on its little back legs as if to see how big the lady was whose gown it took so long to measure.

"When it stands like that it looks like a tiny stick," said the little maid Alice.

"That is a fairy trick to fool its enemies and to keep the little fellow from being eaten up," their Aunt Esther explained. "And do

you see it is coloured like the twigs for further protection?"

"Oh, but isn't it interesting!" exclaimed Sarah and Alice together.

"All worms are interesting when one knows their stories," said the lady.

"When this little chap gets old—a few days old—you know, and tired of its measuring, it goes to sleep in a fairy cradle of silver and silk, and while it is napping a real charm passes over it, and when it wakes up, it isn't a worm any longer, doubling up as it walks; but then it has dainty wings covered with the finest of shining feathers."

"Oh, oh!" exclaimed little Alice, the one to whom worms had been the *most* "horrid," "why, worms are most as nice as fairies! I didn't s'pose they were interesting one bit."

"That was because you had not come to know them and their stories," said their Aunt Esther.

"But what makes this one double up so when it crawls?" asked Sarah, the thoughtful.

"Look carefully and see if you can count its wee little feet," said her aunt. "You see them under each end of its slender body. But you notice there are no feet under its middle; so the only way it can take a step is to stand on its back set of feet and throw the front part of its body with the front set of feet as far forward as it can, and then stand on the front feet and draw the back ones up to the front. A pretty queer way to walk; at least it seems so to us. Every step it takes, you see, it has to make an arch of the centre of its body where no feet grow.

"Because of this looping way of walking these little worms appear to be always measuring and people call them Geometers or Measurers."

Just then a breeze came racing down the street; it gave the lady's skirt a toss and sent the little measurer over its hem; but never a

tumble it took. Instead it let itself safely down by a slender thread it seemed to have been holding all the while in its mouth.

"That's another of its fairy tricks," said the lady. "Sometimes these little worms or caterpillars live in trees and it would be a long journey down to the ground if it had to be made with their queer little feet, so they have a trick of swinging down by means of a silken thread they seem to spin as they go."

"But, Aunt Esther, are other worms interesting like this little measuring man?" asked Sarah.

"Every bit!" Aunt Esther answered; "but one has to get acquainted with them, you see."

"And do bugs and grasshoppers have stories too?" asked Alice with wonderment in her sweet eyes.

"Oh, yes, dear, they all have stories, real wonder-stories," said the lady. "And here this very minute is a little Mother Earwig. She's a queer little body who doesn't show her-

self to every one. She makes a nest under a stone somewhere and broods over her tiny eggs as carefully as a mother-bird broods over the eggs in her nest, and after her baby Earwigs are hatched she loves and defends them as bravely as if she were as big as a lion. She notices colours, too. You wouldn't guess it of such a little insect, would you? She likes pink best of all. When her work is done and her babies grown up, she likes to creep into a pink flower and rest and eat 'pink salad,' for I have to confess she feeds upon the pink petals that form her curtains and canopies.

"And here, my dears, on this stem is a pretty lady-bug or lady-bird, and although she is such a little lady she has relatives as much as seven inches in length and many who have horns and wear armour. I suppose there is a story about why this one always chooses to wear polka-dots. May be I shall find it for you some day.

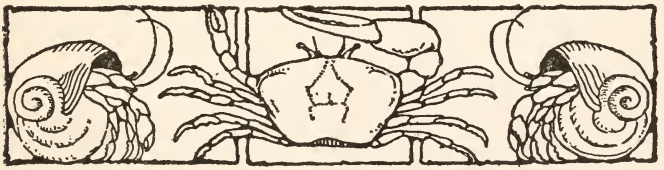
"If we look carefully among the leaves we

may find a grasshopper's cousin,—one who is waiting for his wings to grow, and for his songs to be ready. These grasshoppers' cousins live in the trees and have gauzy green wings which are veined like leaves, and their long slender legs are like the stems of leaves, and the songs they sing are ballads about what 'Katy-did.'

"Oh, yes, my dears, everything has its story; and there are great scholars who are so interested in some of these queer little people as to have rooms fitted up for them to live in where they may study their ways and learn their life-stories."

CHAPTER V

THE CAPTAIN'S STORY ABOUT CRABS



When in motion the crab moves sideways, using the legs of one side to pull with and those of the other side to push with As all the legs do not move at the same time, a continuous and uniform motion is kept up.

Augusta Foote Arnold.

THE CAPTAIN'S STORY ABOUT CRABS

"HELLO, little Skipper! Got a Fiddler in your hamper, have ye? Well, crabs be about as queer folk as ever I struck in all my travels. Some of 'em live on land, and some of 'em in water; and some ain't content with one element but must have both. Sometimes I've thought they were ugly, then again they are mighty pretty. Anyhow, they bear watching and one can learn a heap from even a cute little Fiddler; and, the fact is, the whole crab tribe are a mighty interesting lot."

The speaker—Captain Lyons—had followed the sea since his youth, and though now too old to sail he loved it still, and loved everything that came out of it or that crept upon its sandy beaches, and he was always ready to tell sea-stories and to help other people to love it.

Would they bite, Captain?" and the boy wriggled his bare toes apprehensively.

"Law, no," the Captain answered, "these don't, though some of their relations do; anyhow, they can pinch pretty sharp. These little Fiddlers are all vegetarians and wouldn't take your toe as a gift." And the old Captain's laugh was like the roar of the sea.

"Did ye notice the holes they dig in the sand?" he asked.

The boy shook his head. "Guess I didn't stay long enough," he said, glancing again at his bare feet.

"Well, come along with me," said the good-natured Captain, "there's a big settlement of 'em down yonder, and I'll show you a thing or two of their manner of life."

The two went down the beach together, the boy alert and quick, the old sea captain with the rolling gait of one who had been long accustomed to a floor that rose and dipped with the waves. Soon they reached the low, half-

marshy flats that were kept wet with the overflow of the tides.

"Here they be!" said the Captain. "Regular city of 'em. Now, watch, and ye'll see when they are scared how they run to their holes; and they don't any of 'em wait to see if their own names are over the doors, neither, for they are in such a hurry to get out o' sight they just dip into the first burrow they find; and many's the time I've watched and seen the rightful owner come along and find his burrow occupied by may be half a dozen others, and I've laughed to see him pull them all out and hustle in himself.

"These holes, ye see, are from half an inch to two inches or so across, and they run down a foot or more into the mud and sand, and have a larger chamber at the end.

"It's funny to see the little fellows burrow out these holes. They are mighty neat and careful about it, too, and roll up all the earth they take out into little pellets and carry it to

the door of the burrow; there they halt a minute and look cautiously about to be sure the coast is clear, then the little workman ventures forth with his load and carries it four or five feet away before he drops it. Considerable work, ye see, for a Fiddler to build his house, even if 'tain't anything but a hole in the ground.

"But I'd like to have ye see the Robber Crabs that I've got acquainted with along the Indian Ocean. Though they are seafolk they somehow found out that cocoanuts are worth coming ashore for, so they have seasons of leaving the sea and come onto the land and dig long burrows under the cocoanut palms, and there they grow fat eating the good meat and milk in the cocoanuts which fall to the ground. The first thing they do is to tear off the thick outer husk of the nuts. The shreds of the husks they use to line their burrows with. Then they work the point of a claw into the eye holes of the nuts and little by little dig

through the hard shell and feast upon the meat within. These crabs are two feet long and a lump of fat under the tail yields often a couple of quarts of pure oil.

"The biggest crabs I ever run across though are a Japanese sort ten feet long. They are a sprawling lot and considerable of their length is in their legs.

"But nobody need ever tell me that crabs don't have an eye for beauty, for the way they decorate their shells in colours and patterns, and scallop them around the edges shows pretty good taste and an eye for beauty, if I know anything about it.

"And the funniest thing yet is to see crabs trig themselves out in seaweeds, and even stick little sea animals over their shells. Many's the time I've watched 'em dress up and then go sailing through the mermaid's parlours as grand as if they thought they were ocean swells! Some folks say that they do this to hide their identity, and to keep from being

seen by other animals that are on their way to market after crabs, and it's likely enough, for I saw a little crab one day deliberately take off his bright-coloured seaweed feathers and frills and stick pieces of sponge all over his shell instead when he came into a sea-garden where sponges grew in place of seaweeds. But it looked to me mightily as if the crab was a bit human-like and wanted to be in fashion."

The old Sea Captain and Harry had left the "fiddler settlement" and were walking along the smooth sea sand where the silvery waves, creeping up over Harry's bare feet, were a good deal pleasanter than an occasional touch of a scurrying Fiddler.

The receding tide had left many treasures strewn along the beach, and Harry was quick to spy a crab's broken claw upon the sand.

"Been a fight—most likely," said the Captain. "Crabs don't mind losing an arm or a claw, for they can grow another, as easy as

you grow finger nails! A crab will even turn surgeon and amputate his own leg if it meets with an accident.

"Queer fellows they are! and a most interesting family. And I tell ye, little Skipper, there's more kinds of crabs than you can count on your fingers and toes.

"Right here this minute is the shell of a 'Horse Shoe' or 'King Crab.' Ain't it pretty now?" he said, as he held it up for the "little Skipper" to notice the shining plates that once were a crab's armour, and the rows of ruffled appendages beneath which once covered the gills—the animal's breathing organs.

"The warrior outgrew his armour and cast it off—that's all," said the Sea Captain. "He does that several times in the course of a season." And the Captain carefully showed Harry where the armour had parted when the king crab decided to change it for a larger suit.

"A pretty nice job, I call it, to come out of

a shell so completely, leaving even the claws and gill-coverings unbroken.

"But here is the scamp of all the crab tribes, according to my notion!" exclaimed the Captain, calling Harry's attention to a large sea-shell upon the beach from which extended the ugly head and claws of a "Hermit Crab."

"You see," he said, "this fellow steals the house that some other animal has built for himself; likely he eats the builder, and then, backing into the pretty palace from which he has just torn its rightful owner, he twists the back part of his body about the column within the shell and will allow himself to be pulled to pieces rather than let go.

"Wherever he travels he carries the house upon his back.

"But Mr. Hermit Crab pays dear enough for this way of living.

"By generations of such habits these crabs have lost their protecting armour from the back part of their bodies, besides losing the

use of their legs which have been kept so long cramped up in the shells; and with the loss of these the crabs have also lost their courage, and when they go house-hunting they scurry in terror among enemies ever ready to attack and destroy the cowards.

"Here, Skipper, you just peer into the shell while I pull the Hermit forward as far as I can. See his withered little abdomen, twisted and without armour, and his useless legs back there in the shell, dried up and crooked.

"Good enough for him! Good enough for him! I say.

"He didn't use the gifts the Creator bestowed on him, and now he's lost them altogether.

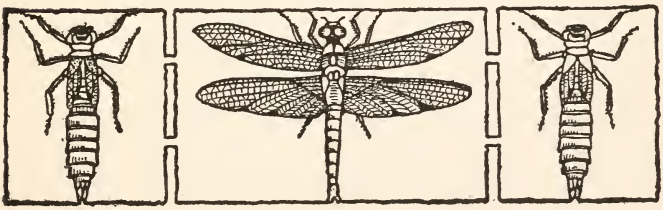
"Put him in your basket. We'll make him a moral lesson up at the hotel. That's all he's good for!

"Now let's go home and have some clam chowder for supper. What do you say to that, little Skipper?"

Harry had gathered more treasures that day than showed in his basket, for he had gone many leagues into the Wonderland of Science, and had begun to gather its treasures. And because he had really started on that road he was sure to find something new every day as he journeyed on; and the farther he went the more his heart was sure to sing.

CHAPTER VI

PAN'S LITTLE BROTHER



Pan is a god—that is to say
He was once—in a far away
Wild, hilly country by the sea;
She always called it Arcady.

Grace Hayard Conkling.

PAN'S LITTLE BROTHER

BOB and the god Pan were brothers at heart. Both loved the woods and the waters, and both found so much joy in the world they could but whistle and sing all the day long.

The old stories tell how the god Pan pulled a reed that grew by a river and breathed into it and straightway music filled the air. Bob cut a stem of willow and made a few deft strokes with his knife and when he put it to his mouth all the air around rang with whistled tunes.

Some there were, it is true, who stopped their ears and shut the doors to keep from hearing his merry whistled tunes. But they were people who would never have liked the first Pan's music either; and there were others

who thought the god Pan's piping was nowhere at all in comparison with Bob's.

So this little brother of Pan whistled like the wind, imitated the calls of the birds, and improvised music of his own, just the way the god Pan did when he sat in the reeds by the river.

But there were things Bob did which I suspect the older Pan never dreamed of. He was not content with sitting still even by a beautiful river, but he was over the hills with such swift feet that he often seemed most like another old god in the story books who had wings on his shoes; he climbed trees and towers, and crawled under old barns, explored woodchucks' holes, plashed through puddles and dipped under waterfalls, and, best of all, he got into all hearts. That was a great deal more than the old time Pan ever did.

"I wish I knew about everything," sighed Bob, one day.

"Well, youngster, use your eyes and your


H. BARTON
This little brother of Pan
climbed trees and towers.

ears. That's what they are for. If you do that every day of your life you will know a good deal by the time you are old," said his uncle, picking up his newspaper and forgetting all about when he was a boy.

But fathers are different. At least Bob's father was. He called Bob "Comrade," and explained things to him, and was always patient, no matter how fast the questions came.

"Well, Comrade, what is it you want to know this time?" he said.

"Why, Daddy, *do* cats have nine lives? Johnny Simpson says they do."

Just that minute a humming bird, with a buzz and a whir, poised in the air, examined a cluster of honeysuckle flowers, then thrust its dagger-of-a-bill into their sweet depths.

"I'd like to know all about him, too; he's so hummy and his throat shines with so many colours," said Bob, forgetting for the moment the cat and its nine lives.

"He's worth knowing about, sure enough,"

his father answered, "and he's a true American, too. No country but America has humming birds. Did you know that?"

Bob shook his head.

"We have something like four hundred kinds," his father continued, "but our little Ruby-Throat is the only one of these gems of the feathered creation that comes to our Northern and Middle States. Most of them live in the tropics.

"I suspect that a pair of them have a nest in one of the small trees yonder. Humming birds hide their nests so well that it takes sharp eyes to find them. I'll tell you a good way that bird-lovers have of locating them. Take my cane and strike on the trunk of each little tree, and see if anything happens."

With the spirit of an explorer Bob advanced on his expedition of discovery. The first tree he struck heavily and its top shook, and the second, and nothing happened, but when the third tree was struck an angry whir-

ring seemed to set all its leaves shaking. He struck again, and a humming bird darted angrily into his face with twitters and squeaks full of wrath.

"There we have it!" exclaimed his father. "Now see if you can find the nest." And sure enough, woven close among the branches was the humming bird's tiny nest. It was of finest fibre and softest downs, and was so covered with bits of moss and lichens as to make it appear but a little knot upon the branch. Two precious eggs, white and no bigger than little beans, lay in the downy cradle over which the mother humming bird hovered, wildly darting now and then at the intruder.

The heart of the great Columbus could scarcely have beat more wildly when he saw his new-discovered world, than did Bob's as he stepped away from the tree and the little mother settled back upon her nest. "She's little, but she's brave!" exclaimed Bob with admiration shining in his eyes. "I wouldn't

hurt her nor her babies—not for the world; and in her eyes I must look as big and ugly as the old Giant Killer."

"It's queer though that a bird can ever get anywhere with such little wings."

"Yet those little whirring wings have carried their owner very far, for humming birds winter to the south of the United States.

"There is an Indian legend of the humming bird which has come down to us from the long ago. It is a story the Indians used to tell their children who wondered as you do about the little Ruby-Throat.

"They said once upon a time there was an eclipse of the sun, 'an evil spirit had tied up the sun,' the Indian said. The earth grew cold and dark, and death threatened all things. 'Who will deliver us?' cried the people. 'Who will go up into the sky and untie the sun?' The great eagle screamed loudly, 'I will go! I live in the sky! I will loose the

sun!' Away he flew proudly, and the people waited in the darkness. But as the great eagle neared the sun his feathers were scorched in its fires and he could not go on.

"The crow was a great talker and a great boaster. 'I will untie the sun!' he said. 'I am not afraid!' And he flew away toward the sun. He, too, failed, and his feathers were burned to blackest black, as we see them even to this day. So one after another tried —and failed; only the little humming bird was left.

"'I'm small,' he said in his little squeaky voice, 'but I'm not afraid. I'll do the best I can.' The people had little hope as they watched him in his flight. He rose straight as an arrow toward the sun, so fast moved his wings that they seemed most like little whirring wheels.

"After long waiting a great shout went up from the anxious people, for a faint gleam

of light appeared in the midst of the gloom, and soon sunshine flooded the world once more.

"The sun was untied, and the courageous and modest little bird had accomplished what the soaring eagle and the boastful crow and all the rest had been unable to do. When the little humming bird came back the people saw the colours of the sun were in his feathers, and ever since he has worn that jewel at his throat."

"Isn't that a splendid story!" exclaimed Bob. "I don't believe our white people can tell one that better shows the little bird's bravery. He deserved that jewel at his throat, don't you think so, Daddy?"

"If it is won by bravery, he certainly does, for his courage is far out of proportion to his size," said his father.

"But, Daddy, how do you find out so many things about birds and animals?" asked Bob.

"Oh, some of them are in the books; you

will read them yourself one of these days; and some things they tell me themselves," his father answered.

"I hope they will tell me their stories as they do you, and that I may understand them as you do," said the little brother of Pan, looking wistfully on into the years, and his heart was in tune with the music that sings through the world that is so sweet and so wonderful that it keeps the wisest ever simple and tender and never lets them grow old.

A butterfly floated airily by, then settled upon a bed of petunias and unrolled a thread-like proboscis which it thrust into the deep cups of the flowers.

"It's taking its supper of honey-dew," said Bob's father; and together they watched the beautiful creature as it slowly folded and unfolded its shining wings; and Bob counted its legs and exclaimed over its shining eyes. The butterfly finished its supper and floated slowly away over the petunia bed, then rising

higher in the air it settled into the wide blossom of a pink hollyhock.

"Oh, I'll bet he's going to sleep!" exclaimed Bob as he saw the bright wings fold drowsily together.

"Yes," said his father, "butterflies go to sleep early. They never stay out after dark if they can help it; and no queen in her gilded four-poster with its silken hangings has a bed to equal the one our butterfly goes to sleep in. No curtains are so fine as those which Nature weaves, and see, Bob, the pollen in the hollyhock hangs about the butterfly like lace."

The boy's brown head bent over the hollyhock and his interested eyes peered into the pink lace hung canopy.

"My, it's pretty! But I'd rather have the butterfly keep awake and let me see what it does," said Bob. "I wish I could find out all its story."

Bob's father stepped down from the porch, and said, "Come." Bob followed as he might

have followed a genie with a magic lamp. A few yards away a brook ran singing over its shining sands. On its bank that very morning the man had found a butterfly's cocoon fastened to a milkweed's stalk. Breaking off the milkweed stem, he gave it to Bob, saying, "Watch and wait. There's a butterfly asleep in this cocoon. If you take good care of it some day it will tell you a part of its story."

If the great Kohinoor had been offered to Bob side by side with that cocoon, the precious diamond would have stood no chance whatever for did not the cocoon hold the butterfly's life story?

Just then a dragon fly, all bronzy and blue, zigzagged by on gauzy wings. Bob clapped his hands to his ears. "Ain't you afraid of it?" he asked. "Johnny Simpson says it's the Devil's darning needle, and that it sews up people's ears."

"That's slander! An evil report! Blackmail!" exclaimed his father. "Johnny Simp-

son ought to know better. None need fear the beautiful dragon fly,—none but insects," he added. "Let *them* dodge him if they can, for he's a hungry fellow, killing and devouring such without mercy."

"Hasn't he a story, too?" asked Bob.

"Yes, oh, yes," his father answered. "The dragon fly has a very interesting story. Before he was a dragon fly at all he was a water baby."

At mention of "water baby" Bob turned to the brook they were standing near, and he saw a new wonder.

"Oh, look at that shining bubble coming up through the water!" he exclaimed, "and—and —why, there's a little black bug right in the middle of it!"

Up came the bubble, and the "black bug" stepped out, a leggy fellow that scurried about for a supper.

Bob watched it running hither and thither, then he turned inquiring eyes to his father.

"It's a water spider, Bob," said his father. "The bubble is its fairy chariot. In it the water spider rides about under the water without so much as getting his coat wet."

"Oh, my!" exclaimed Bob. "The water spider must have a lovely story since it rides in such a shining chariot through the water and never gets wet." And Bob's eyes were again deep and wistful for a story.

"Well, yes," said his father, fumbling the leaves of a book he carried. "It happens that there is a story about the water spider and the dragon fly together, one story about them both."

Bob snuggled down on a mossy tuffet, and Pan himself could not have looked happier when he listened to the winds playing their tunes in the grasses. And this was the story Bob heard.

"Where does Madam Water Spider go every day?" asked one sunfish of another. "I

see her run up her stairway of water weed and then she disappears."

"She says she goes into another world, a world of sunshine, if you know what that means," said the second shiner.

"*Another world!* Well, *I* have travelled more than Madam[1] Water Spider; and *I* know there is no other world. I have been the whole length and breadth of this lake. This water world is all the world there is. Madam Water Spider will bear watching.

"I don't like her ways. She doesn't breathe the way we fishes do, and it is said there isn't a drop of water in her house, although it is down here in the water. I have noticed she wears a queer looking furry coat and she rides in a bubble when she goes through the water. She *says* she carries air in her furry coat, and fills her house with *air,* whatever that may be. I have noticed, too, the door of her house is on the under side. Madam Water Spider has

[1] Adapted from.

queer ways. You may be sure there is something wrong about her. I've no patience with her talk about another world. Another world indeed!"

"Dear Finny," said a water lily that was pushing her way up out of the mud where she was born, "there *is* a world above this water home of ours. I have seen it. I have lived in it. It is so beautiful that I dream of it all the winter through, and as soon as I awaken from my sleep in the spring a Voice bids me come and I climb again the ladders of light as fast as I can.

"We water people cannot see that beautiful world. We cannot breathe its soft air nor be warmed with its sunlight. A change has to come upon us first. I cannot even make you understand what I mean, for we can only see what we are fitted to see in this water world of ours. We have no words to tell of that other world of air and sunshine, of birds and of flowers, and when I try to tell you my words

seem only as idle tales. It was the same with me once; but a change came over me. I climbed up until my face felt the warm touch of the sun. Oh, that was worth all the effort of climbing! Winds, too, caressed me softer than any water waves. All the slime and mud of my birthplace were left behind. I was so changed that even my dress was spotless white and I wore a crown of gold. I wish you could see it all!"

The fishes flirted their tails and fanned themselves with their fins of silver, and believed never a word that the water lily said.

"This water world is good enough for us, and we know it is all the world there is," they said, and opening their big mouths they swallowed a dozen little water bugs and unwary minnows and glided away through the green depths, wise in their own eyes and altogether satisfied.

But a round little water sprite there was

who was a fierce robber and a murderer, too; he had been hiding under a lily pad watching for bugs smaller than himself that he might seize and devour. He heard what the water lily said to the fishes.

"For more than a year I have lived here in this water world," he reflected. "I'm dissatisfied with this way of living. I feel uneasy and sick of it all. Something tells me what the water lily says is true. I am resolved to try to climb up as she does. The safest way must be to go by the road the water lily travels."

Then the little grub pumped the water through his body, and shot up to the surface of the pond close to the lily stem. There he found, as the water lily had said, that all was different from the world he had known. He found it hard work to get his breath. With his six legs he caught fast to a friendly rush that had been put there to be ready to help him

when he should come. He clung with all of his might, and could only think, "This must be the change the lily told about."

Presently the skin along his back split open. "Oh, my! what's happening to me now?" he thought. The next thing he knew was that he was a water sprite no longer, but with four wings of gauziest lace, and a long slender body that flashed with blue and green and bronze, he rested in the sun.

His new wings were wrinkled and wet. Bewildered he clung to the rush. Sunshine and soft winds soon dried his wings and gave him new strength. Tingling with life and gladness, he could keep still no longer, and leaving the friendly rush in zigzag flight he sported in the air quite as much at home as he had ever been in the water, for now he was a dragon fly.

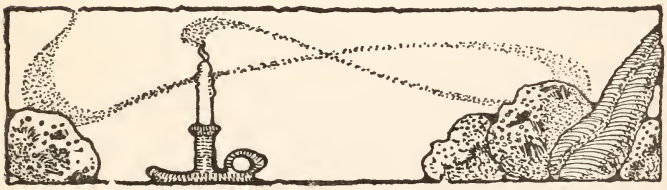
"What would the fishes think if they could see me now?" he said in dragon fly language. "Well, well, they may see my empty shell yon-

der on the rush where I left it, and they may find they were not as wise as they thought."

"Ting-a-ling!" rang the supper bell, just as the story ended. Bob whisked his whistle out of his pocket and answered with a lively tune. Carefully he carried his milkweed stalk with its swinging cocoon, and on his way to the house he stopped and peeped between the hollyhock's pink curtains to see how the butterfly looked when asleep.

CHAPTER VII

PATSY'S BATH-SPONGE



Few greater contrasts exist than the sponge as it appears at the end of the fisherman's hook and when displayed for sale.

Early in January the sponge-fishing season in Florida waters begins. The chief apparatus used is the sponge hook, a three-toothed curved hook attached to a pole whose length varies according to the depth of water; and the sponge glass which is nothing in the world but an ordinary water bucket whose bottom consists of a pane of glass. The latter is used for seeing below the surface when that surface is disturbed by ripples.

Charles C. Johnson.

PATSY'S BATH SPONGE

PATSY hated baths. Not that he didn't like water, for he never was happier than when wading brooks and splashing in puddles; and when he went boating it took the whole family and all the boat's crew to keep him from going overboard. But baths were different—at least they were different before Aunt Ruth came.

Aunt Ruth understood boys almost as well as if she had been a boy herself.

"Patsy," she said one morning at bathtime, "I went to the Gulf of Mexico once, and I saw sponges growing. Sponges grow in sea gardens. Did you know that?"

Patsy was interested at once. He loved the outdoors and growing things, and had a garden of his own. But gardens in the Gulf of

Mexico were something new. He forgot to hate his bath.

"Look here, Patsy," Aunt Ruth went on, "while you have your bath with this fine new sponge I've brought you, suppose I tell you how sponges grow. It's a wonderful story. I just wish I could show you a sponge garden. But first, shake the sponge. It's new, you know, and there's no telling what you may find in it."

Patsy spread the bath towel on the floor and shook the sponge vigorously. Sure enough, out tumbled half a dozen little sea shells. "Palaces," Aunt Ruth said they were, "palaces of some of the sponge's near neighbours in the Gulf of Mexico."

Palaces in a bath sponge! No wonder Patsy was interested.

"Though sponges grow in gardens, Patsy, they are not plants," Aunt Ruth continued. "They are animals—"

"Ho! like snails and toads," interrupted Patsy. "I've seen them in gardens."

"No, they are not a bit like snails or toads," Aunt Ruth answered. "They are just like themselves, and nothing else. People used to think they were plants; and when a wise man long ago discovered that a sponge, like this one of yours, was made by a whole settlement of little animals, no one believed him at first. And that wasn't surprising; for sponges, in their sea gardens, look as if they grew from roots fastened to sea bottoms and are often bright with colour.

"But, Patsy, this sponge of yours is composed of only the skeletons of the little sponge animals who lived and worked and died together long ago. When alive, sponges are a jellylike substance, covered over with a thin skin, and these rough skeletons are out of sight —just as your bones are hidden, Patsy.

"Often I found living sponges, tossed up by

the waves, on Florida beaches; and later I saw them brought up from sea bottoms by the sponge gatherers, who collect and prepare them for the market. When alive, they are bright enough to be beautiful sea plants—scarlet and yellow and shining black. But since they cannot live out of the water, the soft sponge animals soon lose their bright colours, die and decay, leaving the tough, fibrous skeletons which we call sponges."

Patsy squeezed his sponge-skeleton with new understanding.

"It is well for the sponge animals," Aunt Ruth went on, "that their skeletons are so coarse and tough, or they would be eaten, for the sea is full of hungry mouths.

"You see that your sponge is full of holes, big and little. When the sponge animals were alive, the small holes were like little pores or mouths, drinking in the sea water, which was carried through queer little stomachs. The mouths were small that they might strain out


"How do sponges
begin, Aunt Ruth?"
H.M.BARTON

any harmful substances and carry through the sponges only that which they needed to feed upon and to build with. After circulating through all parts of the sponges, leaving air, food, and lime for making skeletons, the water passed out through the larger pores and back into the sea.

"You can tell how many animals lived together and made your bath sponge, Patsy, by counting the large holes in the sponge. Each large hole, with the small ones surrounding it, belonged to one sponge animal."

Patsy counted, and found that thirteen animals had once lived together in his sponge, making it a little sponge town.

"How do sponges begin, Aunt Ruth?" he asked.

"There are two ways that I know of," said Aunt Ruth. "They come from eggs that develop into tiny, floating baby sponges. These soon attach themselves to objects in the sea or to the sea bottom and grow fast. Sponges

and crabs seem to have a queer liking for each other, and crabs may often be seen with sponge families growing on their backs. And sponge gardens are also started by cutting up live sponges and planting the pieces on hard sea bottoms, to which they readily attach themselves, and there they thrive as plants in a garden.

"Your bath sponge is but one of many kinds of sponges. I have gathered sponges that were shaped like pretty vases, sometimes with sea-plants attached, as if the mermaids might have filled the strange vases with sea flowers. 'Neptune's vases,' sponges of this shape are called. Neptune, you know, Patsy, was thought ages ago to be the king of the sea. There are others that grow in bunches, like long fingers, and are called 'dead men's fingers' by people who live on the seashore.

"The framework or skeletons of sponges are very different in the different kinds of sponges. Some are soft as silk, while others are of fibre

of varying toughness. And some are even beautiful with shining, glassy-looking fibres. The arrangement of the little points and lines making up these skeletons is very wonderful, with starry spangles and curious figures more beautiful than I can describe. I'll tell you what we'll do, Patsy, we'll look at some of them through a good microscope."

Patsy was by this time handling his sponge with real delight. Never before had a bath been such fun. When he came out, bright and shining, he said:

"Aunt Ruth, you know about things. My tadpoles have lost their tails. I wish you'd tell me what became of 'em."

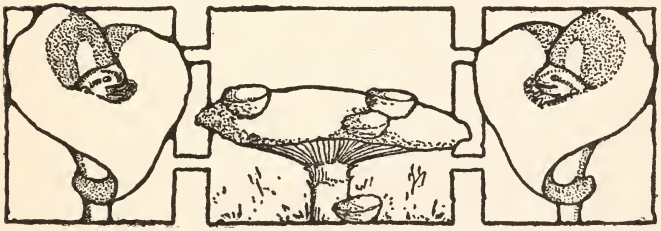
"Oh, tadpoles are just as interesting as sponges, every bit!" Aunt Ruth answered with enthusiasm. "We'll have the story about them at the next bath."

And they did, and many other stories at many other baths, so that bathtime has become a joy to Patsy. Moreover, Patsy is learning

to keep his eyes open, and is discovering that the world is full of wonderful things. And these wonderful things are for every other wide-awake boy and girl who learns, as Patsy did, to look for them.

CHAPTER VIII

LITTLE PRINCE HYLA WHO LIVED IN A LILY



O, grown-ups cannot understand
And grown-ups never will,
How short's the way to fairy-land
Across the purple hill.

Alfred Noyes.

LITTLE PRINCE HYLA WHO LIVED IN A LILY

A SMALL hand was laid on the Wise-man's knee and confiding blue eyes looked up into the brown ones. The Wise-man laid down his book. He had silver in his hair and wore spectacles, but he had read the sweet world's wonderbooks so much that he had kept young, and he and Karl were comrades.

"It's fairies, is it, little Blue-eyes? What do you know about fairies?" asked the Wise-man.

"Why, Marjorie's story-book tells about fairies," Karl answered. "And Marjorie says they are queer little people who live in flowers. She says they have tables no higher than my shoe, and they drink dew out of acorn

saucers. Did you ever see a fairy, Uncle Wiseman?"

"Let us see—'they are queer little people, and they live in flowers.' That is remarkable, indeed, for this very morning I saw something answering that description. Let's go out among the flowers and see what we can find."

The blue eyes grew wonder-wide and looked confidingly into the wise brown ones, as the child and the man walked on together. They pushed sheeny leaves apart, and lifted trailing vines, and peered into blossoms, and to add to the mystery and to the charm, the Wiseman repeated slowly the words:

Fairies, fairies hiding here,
We are friends. You need not fear,
We might, too, be fairies all
If we did not grow so tall.

We would see your palaces
In the flowery chalices,
And the hammocks where you swing,
Trimmed with dewdrops glittering.

Might we see your tables, please,
And your fairy bread and cheese?
We would like to stay to tea
If we might invited be.

Just at that very minute Karl exclaimed excitedly, "Oh, it's true! It's true! Here's the fairies' little table!" and his eyes were like stars as they looked down at a pale pink toadstool growing in a shaded corner of the garden.

Karl and the Wiseman were both down on their knees in a twinkle, examining the fairies' table.

The tall man showed his little comrade its soft silken covering, and the delicate fluting on its under side. And as they peered about Karl discovered a half dozen of the little covers of the eucalyptus seed capsules, which are almost exact counterparts of acorn saucers—for all this is a story of a garden in California, where the beautiful eucalyptus trees grow.

Karl was in fairy-land, and his baby face glowed and dimpled with delight.

Then the Wiseman directed his attention to the spreading eucalyptus tree above their heads and told him how the little covers over its curious seed cups lift on tiny hinges of Nature's own making, that the sunshine may slide in and make the baby seeds grow strong and brown; and how, when the covers are no longer needed, they drop to the ground.

Karl picked up some of these pretty carved dishes and with careful fingers he "set the table" for the fairies, placing a row of eucalyptus saucers around its rim.

"Now," he said with a confident tone, "now we must look for the fairies. I s'pose we'll find 'em, don't you, Uncle Wiseman?"

"Oh, the sweet faith of childhood! The happy heart of childhood!" thought the tall man with a far-off look in his eyes, as if seeing again a little lad away back in his own life's morning—a little lad who loved the

sweet world's fairy stories as well as his little comrade who walked with him that sunny day in the garden by the Western sea.

"Come this way, Karl," he said for answer, and led the boy toward a great green border of calla lilies whose luxuriant leaves seemed lighted by their scores of blossoms, tall and gleaming white.

Into lily after lily the blue eyes peered. At length a half-suppressed "Oh!" came from the rosy lips. The "Oh!" was an outburst of exceeding delight, but so full was it of heart-longing and of awe that it was almost a sigh. With one little finger pointing into a lily cup, his blue eyes turned from the wonder in the lily chalice to his uncle's face, and he said in a voice that trembled:

"Marjorie said so! She said they were little and queer and lived in the flowers. Oh, I'm so glad we've found this one! Oh, but he *is* queer! Only see his queer little hands. And I can see his heart beat way up in his

throat. Oh, Uncle Wiseman, he winked at me!"

"Karl's little fairy that lived in a lily" soon became an object of interest to all of Karl's friends. The Wiseman attempted to explain to Karl that the queer little fellow who had chosen a lily for his castle was only a "peeper" or "tree toad," and that his real name, by which the learned called him, was *Hyla Pickeringii,* but Karl's believing little heart suffered such hurt at this matter-of-fact disposal of his "fairy" that the man of science dropped into the harmless illusion with his little comrade, and together they studied "the fairy that lived in the lily."

They saw him go down the golden ladder into his castle-hold and to the side overshadowed by leaves, when the sun grew hot.

"Little Prince Hyla," they called him. Karl learned that his fairy prince was of lowly origin; that his first home was in the mud in the edges of a marsh, and that he spent all the

springtime of his life among willows and lily-pads and glow-worms and starry marsh flowers.

Prince Hyla, though so small, was a mighty minstrel, and in the dewy mornings and cool, refreshing afternoons Karl learned to know his happy songs; and the Wiseman made free translations for him of the little minstrel's melodies.

He told Karl that the songs of the fairy prince, like those of the dear old bards and of the sweetest singers of today, came from a heart that could not help singing and were about things he knew and loved.

"What does my fairy say in his songs, dear Uncle Wiseman?" Karl asked.

And his uncle answered: "He says, 'oh, life is sweet!' and 'the world is a fairy world!' He sings over and over his happy memories of his life in the marsh where the dewdrops loved to hang and make little rainbows in the sedgy grass, and where water spiders danced

on the quiet pools, and a hundred fairy miracles were wrought. He sings a pretty ballad of the pollywogs, whom none know better than he—how through a wonderful magic given them by the great Creator of all things they are changed into frogs with long legs and wide mouths and shining eyes, and songs so like his own.

"He sings of crisp days and the long night of winter when he slept safely in the soft mud beneath the water and dreamed his fairy dreams, and how the spring called him early to pipe to the world that winter was over. He tells how he, with forty other fairies just like himself, popped their heads out of the water and crept out upon wet logs in the sun and practised their songs together.

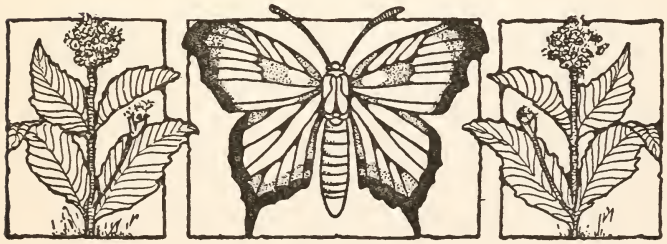
"Another story that he trills with a tremor in his voice is of his escape from a flying dragon with feathers and a sharp beak, which once upon a time nearly caught him in its terrible talons and would have stopped his songs

for ever. But he crept quickly to the branch of a tree and by means of fairy magic he changed his colour to the colour of the bark of the tree. So he escaped and the flying dragon passed on. Ever since, his song has had special trills of thanksgiving for his deliverance that day."

Many other stories did Karl and the Wiseman learn together, stories that are true, and that are in the sweet world's wonder books, but there was no story that Karl loved better than the one of little Prince Hyla who lived in the lily.

CHAPTER IX

THE LITTLE KING AND THE BUTTERFLY PREACHER



He owns the bird songs of the hills,
The laughter of the April rills;
And his are all the diamonds set
In Morning's dewy coronet,
And his the Dusk's first minted stars
That twinkle through the pasture bars
And litter all the skies at night
With glittering scraps of silver light;
The rainbow's bar, from rim to rim,
In beaten gold, belongs to him.

James Whitcomb Riley.

THE LITTLE KING AND THE BUTTERFLY PREACHER

ROGER was King in the Land of Running Brooks. There were scores of people who thought they owned the beautiful country, for they ploughed its fields, and broke its rocks, and cut down its trees. But no man owns anything that he does not take time to look at and love, and take into his heart.

These busy workers only planned how they might make the brooks turn more mill wheels; they never stopped to hear the water sing and to see it sparkle. They thought the trees would make good lumber, but they never listened to their whisperings. So they did not own them at all.

But Roger the King grew richer and wiser every day, for he loved the hills and fields, and because he kept his head up, and his eyes open,

he saw and heard many things that others never knew anything about.

One day when he was following a brook he heard a little voice as soft as the south wind when it sighs; and the voice said, "Every wrong deed rubs a feather off one's wings."

The little King stopped to listen. "That sounds like preaching," he said. He bent his ear closer and again he heard the same words, "Every wrong deed rubs a feather from one's wings." This time he was sure the voice came from a clump of catnip growing close by, and peering into it he spied a big yellow butterfly atilt on a stem.

"Every wrong deed rubs a feather off one's wings," sighed the butterfly as the catnip clump parted.

"Are you a preacher?" asked the little King respectfully.

"Why shouldn't I be?" said the yellow butterfly from the midst of the catnip. "Why shouldn't I preach?"

"Because only Jack-in-the-Pulpit ever preaches around here," answered the King, reaching down for the fishing-rod sceptre he had dropped in his surprise.

"That shows you don't know everything," exclaimed the yellow butterfly, fluttering about with excitement. "All this Land of Running Brooks is full of preachers."

"Why, is that so?" exclaimed the King in surprise. "I thought this was just the nicest kind of a country to have a good time in. Hope they don't preach long sermons! Where are the preachers and churches, anyway?"

"Why, every leaf has a sermon written on it," said the butterfly preacher. "Here are tall grass steeples, and mullein-stalk church spires, and pine-tree cathedrals—all full of preachers and bells and choirs."

"You don't say so!" said the King doubtfully. "But I thought everybody had to keep still at church, and got tired; and that preach-

ers were always solemn and wore black clothes." The King looked very puzzled.

"As I told you, I am a preacher," came the answer out of the clump of catnip, where the butterfly stood flirting his yellow coat-tails nervously. "Listen, this is my sermon: 'Every wrong deed rubs a feather off one's wings.' "

"Well, I think you are a pretty gay preacher," said the King, "and you have a queer pulpit; but I like you, and I like your sermon. It's short. Long sermons that I can't understand anything about always make me tired."

For reply the butterfly only flirted again his long coat-tails of yellow and black and fanned himself with his shining wings. Until then he had not so much as looked beyond his pulpit and his flowery cups of catnip, but now he raised his eyes, and as soon as he looked he knew at once that the one to whom he had spoken—not over politely—was none other

than the King of the Land of Running Brooks.

"Sire!" he gasped, and bowed so low he nearly tumbled out of the bunch of catnip. "Pardon me, Sire. I did not know it was the King who spoke."

"Oh, that's all right!" laughed the King, waving his fishing-rod sceptre. "But I wish you would explain that sermon of yours. What do butterflies know about feathers?"

"We are covered with feathers, Sire, and 'every wrong deed rubs a feather off one's wings,' " answered the little preacher.

"You must be pretty perfect then, for your wings look as if they had never dropped a feather. But I always supposed that was only yellow dust on your wings."

"That shows—" The butterfly started to say again, "That only shows you don't know everything," but remembering it was the King to whom he was speaking, he twisted his words into, "That shows that I have not been a faithful subject"—the butterfly bowed again very

low—"else I had given you a feather for your microscope. Then you would have seen that what looks like dust are feathery scales, so delicate that the lightest touch rubs them off." Then the butterfly placed a tiny golden feather on a catnip leaf and presented it to the young King, who thanked him and managed to wrap it up carefully and slipped it into his pocket.

"But, Mr. Butterfly, you don't seem to have any mouth that I can discover," said the King, "and you have a queer way of talking, though I understand you plainly enough. Do you mind explaining to me what that black thread is where your mouth ought to be?"

The butterfly again fanned himself hard with his wings and flirted his coat-tails in his excitement and displeasure. But remembering who questioned him, he replied politely, "That, Sire, is my proboscis. It is an exceedingly useful and beautifully constructed organ, and for the life of me, I cannot see how any one exists without one. Through it I am able

to suck the honey of flowers and to quaff sweet draughts of dew. Though so slender and delicate, it is made with three separate tubes. It is through the central tube that I take my dainty fare. I will show you, Sire, how I drink from these flower cups. So much talking quite exhausts me." And the butterfly uncurled his proboscis and sipped long, delightful draughts of the tea which the catnip had brewed in its purple cups.

"Oh, I see!" exclaimed the little King. "So these little lavender blossoms are your tea cups? Well, well! I am learning a number of things. Would you mind telling me how you ever got to be a butterfly?" he added, when the butterfly was refreshed by his tea.

"Oh, that I cannot tell!" said the butterfly. "Life is far too wonderful for me to understand. But first there was a tiny egg on a fennel stalk—it seems to me ages ago, for I have been living whole days and nights as a butterfly among the flowers. This is the life

worth living! From the egg on the fennel stalk a caterpillar was hatched. A hungry fellow he was, I have been told, and mostly stomach. He fed greedily upon the fennel leaves for twenty or thirty days, changing his skin many times during his caterpillar life; and each time he received a suit larger and handsomer than any he had had before. At last he became tired of eating and spun himself a silken cover, and no longer a caterpillar but a chrysalis, he fastened himself by a thread of silk to the fennel stalk.—Your Majesty must know that I come from a family of silk makers." And the butterfly nodded his head importantly.

"The winds swung the chrysalis lightly and the little silk maker dreamed dreams of flowers and wings and honeydew. Finally the silken cover burst open and the dream came true. I, your Majesty, am the dream!"

Again the butterfly sipped from the pale purple catnip cups. "This is my supper," he

said wearily. "Night is coming on. I beg your Majesty to excuse me, for our family never stay out after dark if we can help it, and I must finish my cup of tea."

"Well, Mr. Butterfly, I think you are an interesting preacher," said the King, "and I thank you for your sermon."

The butterfly preacher did not answer, for he was already nodding over his cup of catnip tea.

"Well, well," said King Roger, "it comes to me now that I have heard there be those in the Land of Running Brooks who 'keep seven Sabbaths in every week.' If this be a sample of their services I am ready to join them."

Just beyond the shadows a tall primrose that had impatiently waited for evening began to open its yellow flowers, and the young king stopped to watch their petals unfold. At last, as with a great glad heart-bound they burst into perfect flower. "They are shining cups holding a rare perfume," said the King.

"They are censers," he added reverently, for he remembered how "in the cool of the day the Lord walked in his garden." Just then a pair of bright wings fluttered about the tall primrose stalk and a long tongue was thrust into one of the yellow cups.

"How's this, Mr. Preacher!" exclaimed the young King, "don't you practise what you preach? You told me you and your family were never out after dark, and here you are! Wouldn't wonder if you lost a feather from your wings this time."

The wings whirred hither and thither and out of their midst the little King heard a queer whirring voice that said, "Night is the time for us to fly. We are the Knights of the Moon. All day we have hidden from the glare of the sun, but as soon as the Lady Moon trims her lamps we glide out of the shadows and enter upon our gay carnival."

"But didn't you tell me that you butterflies

were too choice of your fine feathers to fly about at night?" asked the King.

"Oh, you take me for a butterfly, do you?" came from the whirring wings, and the wings whirred faster and louder than ever. Evidently the Knight of the Moon was not pleased.

"A butterfly indeed!" he exclaimed. "Saw ever your Highness a butterfly with a fine fat body like mine, or with antennae that are delicate plumes like these I wear, or wings that are long and gracefully slender like mine?"

By this time other wings were fluttering over the primrose flowers, and the little King began to think he had made a mistake. Drawing nearer he saw the wings that fluttered about the primrose stalk were not wide and yellow like those of the little preacher. He had been mistaken, and taking off his cap he apologized as gracefully as if he had not been a king.

The Knight of the Moon was appeased and

exclaimed, "The King of the Land of Running Brooks should know us better! We are a world renowned family, and so highly regarded that the different branches of our family have been named for gods and goddesses and for heroes and heroines of ancient mythology.

"From unremembered ages we have been spinners and weavers of elegant silk. I am a MOTH, your Excellency."

The young King bowed low and said politely, "I shall be glad to know you better."

The moth fluttered a moment before the King, then lit upon the trunk of an oak near by.

"Your Highness observes the protective colouring of my forewings," said the moth. "They are in imitation of dry and crumpled leaves, and of the bark of trees. For this device we are most grateful, since by means of it we are less conspicuous to our enemies who are only too ready to devour us."

"That's fine!" exclaimed the King. "Why,

I would never know you were not a part of the bark of the oak."

In appreciation the moth waved his plumy antennae and uncurled his tongue full five inches long, then continued, "We moths have what your wise men call 'a circulatory system.' I myself have a heart and liver and a capacious stomach and blood. Yes, your excellency, *real moth blood.* And to accommodate all these you see we have fine fat bodies. And does the King observe that we wear the finest of fur, far finer than any that trims the robes of kings?"

"Have you Knights of the Moon as interesting histories as have the butterflies?" asked the young King. "I learned that butterflies pass through varied and strange experiences before they become the beautiful winged creatures we admire. Indeed I am told they even have had the humiliation of being crawling caterpillars at the first."

"*Humiliation!* do I understand you?" ex-

claimed the moth, his wings whirring angrily. "Why, Sir King, a caterpillar is one of the wonders of creation as well as one of the most beautiful!

"It is possible that your Majesty has been too occupied to observe them closely, to note their changing segments of richest colour, ornamented with velvet stripes and shining dots and bearing most marvellous spines and horns. To see a caterpillar molt is worth the convening of a king's parliament. At each changing of the outgrown skin the caterpillar becomes more brilliant and more beautiful.

"The spinning of its cocoon is another marvel which well might fascinate a king to the forgetting of his crown; while many a chrysalis with its wonder of shining green and jade and flecks of gold would match any gem a monarch wears.

"But, O King, the mysterious change accomplished within that little swinging cocoon,

that miracle of silk and glue, none but the great Creator can explain."

The speech had been a long one, and for very weariness the whirring wings settled down, long and straight, and the moth rested wearily upon the oak tree trunk.

"My Table Round shall be told of this which I have learned," said the King, "and respect for caterpillars as for all the little people in my kingdom shall grow in their hearts as it has grown in mine today."

The moth upon the oak tree whirred its wings in grateful appreciation and waved its plumy antennae, and said, "Your Excellency, I have taken no nectar since last moonlight and you may realize my need—, besides I am very tired.

"Yonder float my distinguished relatives, the pale Knight Luna and the rich Cecropia. Those are among the aristocrats of the moth family. They never eat, neither do they

drink, and in my opinion they are losing much of the joy of life.

"The Knight Luna, you will observe, is peculiar in his dress, wearing a pale green suit with long and elegant trailers richly trimmed with lavender and rose. Since these neither eat nor drink they have more time than I for talking. You will doubtless find them interesting—as all our family are—and by your leave, I will return to the primrose stalk before the blossoms are rifled of all their sweets." And away whirred the moth to the primrose stalk.

The pale Luna had already sailed away upon a moonbeam and the rich Knight Cecropia had gone awooing a fair moth lady.

"Truly this is a wonderful realm," thought the King, "and I have much to learn. But I must away to the castle hall and tell what I have seen and heard to the little princess and to my Table Round."

The King took off his cap as he passed

through the nave of the pine tree cathedral and close to the clump of catnip where the butterfly preacher was fast asleep with his gay coat-tails folded away out of sight.

CHAPTER X

LACES FROM SPIDERTOWN

Little Miss Muffet
Sat on a tuffet
Eating curds and whey,
Along came a spider
And sat down beside her—
Mother Goose Rhymes.

LACES FROM SPIDERTOWN

"YES, Barby, it's a nice world, full of surprises. Keep your eyes open and your heart loving, and something sweet is sure to keep happening."

Just as Barby's Uncle Wiseman said the last sentence the clouds parted and the new moon sailed out, like a golden boat on a silver sea. Barby looked up with delight, and Uncle Wiseman smiled and nodded, as much as to say, "I told you so!"

Early next morning, when Barby danced out onto the veranda, she saw that over all the grass were spread pieces of lace-like gossamer glittering with jewels of every hue. At her exclamations of delight Uncle Wiseman nodded again; but Barby's brother Tom said:

"That ain't anything but just spider webs with dew on 'em."

A shadow fell on Barby's face, but Uncle Wiseman said:

"Now, Barby, I'll tell you what those look like to me. They look exactly like fairies' laces—the gowns they wore last night when they danced on the green."

"Oh, you dear, darling Uncle Wiseman!" exclaimed Barby, who was half fairy herself.

"Fairies never wear the same dress twice, I've heard," said Uncle Wiseman, "and I suspect that when the morning star blew out her candle the fairies just dropped their party dresses with all the jewels in."

"Oh, how I wish I knew more about it!" said Barby with a sigh which went to Uncle Wiseman's heart.

"Well, sit down, little lady, and eat your curds and whey while I look over the morning paper. I may find something about it somewhere. We'll see."

Later, when a small hand was laid on Uncle Wiseman's knee, he said:

"Well, Barby, it's a long story, and I am sorry to say it's not altogether a pleasant one. However, I'll just give you a fairy's own report about those laces."

Uncle Wiseman held up the morning paper and read—at least it sounded as if he read—the story, though Barby noticed that his eyes wandered off to the hills:

"The moon was at its full, and never was there a fairer night, never greener grass to dance upon. We fairies all were dressed in finest gossamer, the work of lace makers in Spidertown. Queer little lace makers they are—for they carry their spinning machines with them wherever they go."

"That's it! They are spiders! I told you so," interrupted Tom, who, at prospect of a story had dropped his "Robinson Crusoe" and come out on the veranda. Uncle Wiseman paid no attention to the interruption but went right on:

"The laces are woven from finest of threads

which are made from a kind of gummy fluid spun out from the little spinning machines. The fluid threads harden and grow tough in the air. Fine as the threads are, each one is made of a multitude of finer threads; and though so fine, they are strong enough for constructing bridges and cables for the spinners' own use.

"The sun was low in the west when we fairies sent in our orders for our gossamer gowns. So fast do these spinners and weavers work, that before the evening star was out our gowns were done. Indeed, I have heard that these skilful workers will spin the threads and weave them into a piece of lace more than a foot square in three-quarters of an hour, if undisturbed.

"Our gowns were woven by small black spinners whose looms are in the grass, but the veil I wore was made by one who worked among the roses by the garden wall. All the

threads of her lace were crossed and netted with as perfect regularity as if she counted and measured every mesh.

"While I admire her work, I shudder when I think of all I saw in her house and wonder how one so cruel and heartless can weave such beautiful fabrics. Her house is full of nets and traps and pits. She has fangs and hooks and poison bags ready for instant use. Even while at work on my veil, a fly came by, singing a merry tune. He was dressed in a wedding suit of bottle green, with new gauze wings. The lace maker heard his happy song as he drew near. Quickly she left her loom and, deaf to his cries, bound him with her ropes, then stung him to death and drank his blood. I would go without laces for ever rather than again see such a sight.

"While we were talking I asked Madam Spider—"

"There! I told you so!" exclaimed Tom.

"'Course Uncle is telling about spiders. Didn't he call their webs laces from Spider-town?"

"Hush!" said Barby. "Uncle Wiseman don't like to be interrupted. Don't you s'pose I understood?"

"For convenience we may as well call the spinner by her popular name, Madam Spider," said Uncle Wiseman, obligingly, and matter-of-fact Tom was satisfied.

"Let me see, where was I?" said Uncle Wiseman. "Oh, yes, the fairy asked Madam Spider if she were an insect.

"'An insect!' she cried, and her whole web shook with her fury. 'An insect—indeed! What would *I* do with only six legs and with a body nearly cut in two? Neither have I ever been a grub, I would have you understand. Insects, so far as I know, are only made to supply my feasts.'

"The dry skin of a spider hung in one corner of her web. I feared I was seeing a Blue-

beard's chamber; but she assured me it was but her cast-off suit.

"'It grew too tight with my feasting,' she said, 'so I took it off and hung it up yonder.'

"A silken bag swung beside the spider's old suit. When I questioned her of that, she nearly snapped a thread in her excitement. 'That bag holds 2,000 precious eggs!' she cried. 'I sometimes carry it hung around my neck for safety.'

"A small spider skulked in one corner of the web, hiding under the leaves. 'Is that one of your children?' I innocently asked.

"'One of my children!' she exclaimed. 'Well, hardly! That is Mr. Spider, my husband. He keeps at a safe distance for I have told him if flies are scarce he will serve me better than nothing for a supper.

"'You must know that we female spiders are not only the industrious ones, but also the largest and rule the home.'

"But the most wonderful part of my story

is yet to come. When my veil was done I threw the gauzy thing over my head and arranged its folds, looking in a dewdrop mirror. The spider watched me, then something like a sigh shook her web.

" 'I was not always like this!' she exclaimed. 'You will find in ancient books it is written of me that once I was a beautiful maiden, so beautiful that even goddesses were jealous of my beauty. My name was Arachnae then, and I lived on the banks of an icy and beautiful river. I was a busy spinner in flax and wool and silk; and so fine and shining were my threads that beholders said I wound the sunshine and the mist upon my spindle. The wonder of my weaving delighted all the world.

" 'The Goddess Athena saw my laces and, boastful of her skill in spinning and weaving, she dared to match her work with mine.

" 'The day came for the trial of our skill. My wheel and my loom were ready, and in


H. BARTON
"I was a busy spinner in flax and wool and silk."

the shade of a mulberry tree I stood impatient to begin. Athena took her place upon a summer cloud. Then with my finest threads of every hue I wove into my web the histories of the gods, the stories of their battles and their loves. The great Jupiter unbent his brows as he looked upon my work, and I felt that I had won.

" 'Then Athena spread out the wonder of her weaving. So fine and so thin was her web, the sunshine and the mist fell heavy beside it. In it she had wrought the enchantment of forests and of gardens, the glory of sunsets and the mysteries of life, the tragedies of giants, of dragons, and of the gods themselves. All the world and even Jupiter forgot my work.

" 'Then I knew that I might never again touch spindle or distaff or loom. I cared no longer for life. My sorrows touched even the heart of the victor goddess, and with the tip of her spear she touched me. I was

changed to what I am—a spider—hated of gods and men. Go, said Athena, and spin if you will for ever!' "

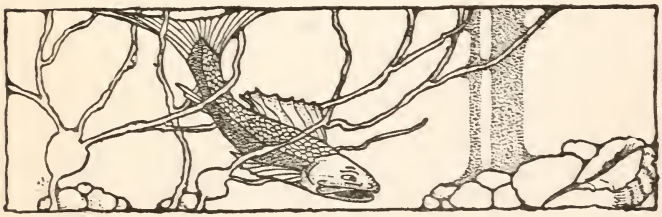
When Uncle Wiseman had finished his story, he noticed the jewels were gone from the laces on the grass. For a few minutes Barby sat quiet and thoughtful, then she said:

"But, Uncle Wiseman, there is something in the story I cannot understand. The Princess True has taught me that Trouble and Sorrow are good angels in disguise. She says, whenever they come they bring in their hands precious gifts and sweet graces. But I cannot see that the spider-maiden grows any better."

"True, true," said Uncle Wiseman, "and now that I think of it, that may be the very reason why no prince comes to break the spell which keeps her always a spider."

CHAPTER XI

KING NEPTUNE AND HIS MERMAIDS AND MERMEN



In ancient mythology Neptune was the chief of water deities. The symbol of his power was the trident, or spear, with three points, with which he used to shatter rocks, to call forth or subdue storms, to shake the shores, and the like. . . . His horses had brazen hoofs and golden manes. They drew his chariot over the sea, which became smooth before him, while the monsters gambolled about his path.

Thomas Bulfinch.

KING NEPTUNE AND HIS MERMAIDS AND MERMEN

ALL the western sky was billowy with white clouds driven before the wind like great rolling waves of a stormy sea.

"The sea was like that when it came in great rollers up onto our coast," said Olaf, who remembered his native Norway and the wide fjord where he and little Christiana had played.

"And this big pine tree over our heads sings like the sea at Cape Cod," said Don the traveller.

"I wish I could go to the sea," sighed Polly. "I love sea stories, and when I am tired, I shut my eyes and just think, and think about the corals and seashells that Uncle has in his cabinet, and it makes me forget that I am

tired. But it would be a hundred times better to see the wide ocean with its white waves rolling in, and to really gather wonderful things the waves cast upon the sand. I just think it would be nice to wander about through the halls of the sea as mermaids and mermen do in the stories."

"I wish I could be an explorer," said Don. "I have read of men who search the sea and find out its wonders, and I mean to do that some day."

"I'd rather be a diver," said Olaf. "I'd go down poor and come up as rich as a king with my pockets bulging with pearls; and I'd find the old wrecks that lie at the bottom of the sea and bring up their treasures."

Then up jumped Gladys, the youngest, brightest, and very sweetest of the group. "I know how to make magic wishing caps!" she said. In a twinkle she twirked great green catalpa leaves into little caps and clapped them on the heads of all,—on Olaf's yellow

"I just think it would be nice to wander about through the halls of the sea."

shock, over Don's frowsy curls, and Polly's pretty head with its golden pigtails. She kept one cap for herself, and the biggest, best of all, she laid tenderly on Uncle Ezra's silver hair.

"Now," she exclaimed, "all wish to be mermaids and mermen for a whole hour. Wish *hard,* and see what will happen! Uncle must be Neptune, King of the Sea. He will tell us about his kingdom and its wonderful treasures. He must have a trident!" and Gladys looked hastily about her. Everything seemed always to happen for Gladys.

"Here's Polly's sea-green parasol!" she exclaimed merrily, "and it has a prong on the end of the handle. Splendid!"

"Ha! won't the old sea boil when *that* trident shakes!" said Don, pulling his conjurer's cap closer over his frowsy locks.

Then Neptune stamped his foot and shook his trident,—and it was all very wonderful,—but soon a white fog ever so much like sea

mist rolled up from the valley, and winds shook the pine tree till it sang sea-surges.

"You mermaids better lay your hairpins and ribbons on some coral-reef," said Don. "Whoever heard of mermaids with side-combs and hair ribbons!"

Then the trident shook again and Neptune spoke: "To mermaids belong ribbons and combs of pearl. No land maiden has such wealth of both as the mermaids wear. If Don, the merman, will whistle for his dolphin and take a ride through the sea-marts he will find it true."

"Oh, Uncle!—King Neptune, I mean—please tell us about them," said Polly, settling herself comfortably upon the carved arm of Neptune's throne.

"*I* say, I want to *learn* something. I'd love to explore the sea, and find out all about it," said the matter-of-fact Don. "Gladys's fairy caps are nice enough for *girls,* but a boy can't imagine he's in the sea just because he's got a

catalpa leaf on his head." Then seeing the distress in Gladys's face, he said gallantly, "Your caps are splendid, Gladys. We'll wear 'em. Why, we'd even wear 'em to sleep in if they'd make us real mermen for an hour."

Then the trident shook again and through the roar like sea-surges King Neptune said: "My mermaids shall have ribbons and pearls; my mermen shall see marvels and learn facts.

"If the sea-nymph, Polly, will hie to the grotto yonder, she will find a casket on a ledge by a bunch of coral. Bring it, my dear, and the Triton horn beside it."

A light rippled over Polly's happy face as she tripped to the house and on a shelf by the window she was quick to find the "casket" and the long twisted sea shell.

Again the trident shook and the command was given, "Let my mermen send a tidepool into yonder hollow."

Don, who was now in the game, brought a pan of water. "It's just a dish pan," he said

aside to Olaf, "but I s'pose if the sea-king shakes his trident over it, it will be a tide-pool."

Neptune unlocked the curious casket with a key which he explained was made from a shark's tooth, and five heads wearing their fairy green helmets bent eagerly over the box. Lifting from it a tangle of what looked like ribbons and silks, and feathers and fringes, King Neptune handed it to Gladys with directions, "Cast it into the tide-pool, my dear." Gladys dropped the strange dry tangle into the water, and at once it began to unfold and to float out, showing what looked like beautiful, many-coloured ribbons and plumes, and petals of gayest flowers.

"That's magic, sure enough!" said Don. "Oh, but it's sea-weed! I've seen it tossed up in tangles on the sand at Cape Cod; and it's floating out and unfolding; and it looks just as it did in the sea."

Then Olaf's eyes shone with a glad far-

away look as he said, "There are pieces here that look like the wrack that is tossed upon our rocks in Norway. We used to gather it in great loads and dry it to burn. One kind we used for food."

"Yes," said King Neptune, "Norway's wrack is very valuable. I see to it that Norway has no lack, for this bounty of the sea brings more wealth to Norway than do all her fisheries."

"Do the real mermaids down in the sea weave these silky ribbons and make these dainty fringes?" asked puzzled little Polly.

"Oh, my, no!" exclaimed Don. "Mermaids don't do a stitch of work. These just grow. Think, Polly, of going out in the sea-gardens and picking off ribbons by the yard."

"Of picking plumes, too, and jewels, and fans, all tinted and glittering," added Neptune. "The sea-gardens are full of them. The mermaids can have new ones for every party, and a plenty to select from."

By this time the tangle in the tide-pool had floated out almost as beautiful as it was when in the ocean gardens. There were gay ribbons of every hue and feathery sprays and delicate fronds too fine to bear a rough touch or a single breath of land breeze, and pink and purple fringes and laces and dainty bits that were like the finest silver filigree.

"Take what you wish," said the Sea-King. "And here are strings of pearls for each of you," he added, bringing long shining strands from the tide-pool; "and here's a mermaid's fan, and here are vases for your sea flowers.

"For my mermen I have jewelled stirrups, and jingling bridles to use when they ride their dolphins; and here are starfish spurs; and beaded cups of malachite and pocket books that once were sharks' egg shells; and I have belts and banners, and crests and badges for all their orders."

"And all these grew in the sea!" exclaimed Gladys. "I don't wonder that Olaf wants to

be a diver." And Olaf answered gallantly, "I would bring you jewels and ribbons enough for a queen."

"Only think of pearls growing on bushes!" exclaimed little Polly. "But—look—these don't look just like pearls, not *honest* pearls—after all," she said questioningly.

"They are seeds and berries. Don't you see they grow thick among the leaves on these long trailing stems?" said Don with an air of superior wisdom.

"Ah," said King Neptune, "though mermaids wear them, and doubtless look quite charming with these shining strands in their floating sea-green hair, yet they are not *our* kind of pearls. Neither are they seeds nor berries. They are simply pretty little air bladders, buoys to keep the sea-plants afloat. My ocean gardens have many such air-buoys of different shapes and sizes. Why, I have some as big as barrels, and let me tell you, some of these air-bladders six or seven feet

long have stems so fine that they are used for fishing lines by people in whose sea they grow. And another wonder is, stems as fine as these are cylindrical and hollow," and the King broke a line that floated in the water. "Take this magnifying glass, made from good sea pebble," he said; "it will help you in learning of the wonders of my kingdom."

"But, oh, my!" exclaimed Polly, "here are ever so many kinds of real sea-flowers all growing on one single stem, and their roots grow out of this sea-shell."

Wonder of wonders! these were, as Polly said, finest sea-plants, pink and rose, and yellow and red, and silver and green, all growing from one slender stem, and with rootlets clasping a sea-shell. What could be plainer?

The wise Neptune allowed the children to examine the cluster for themselves, to admire and wonder. Then he said, "Aye, aye, others have thought as you do. The wise ones of

the earth have for ages been deceived just as you are by these dissemblers of the sea.

"Science calls these sea plants *Algae,* and never an Alga grows that has flower or seed or stem or leaf or root. It's queer, isn't it?" he added, seeing the wonderment grow in the faces of his mermaids and mermen. "The sea is a place of many mysteries, and even the wisest scholars have not found out one-half its mysteries or guessed one-half its riddles."

"But—but—see—isn't this a root growing right out from this shell?" asked Don, "and here are leaves."

"What look like roots are not properly roots," said King Neptune. "They are only hold-fasts, which, sucker-like, attach to shell or rock or sea-bottom. Roots, you know, bring nourishment to plants, and these make-believe roots never do that, neither do these sea plants need roots, for the whole surface of these kinds of plants draw their nourishment

from the salt and bitter sea water in which they thrive. Even these suckers, or hold-fasts are not necessary to the life of such plants, for little my beautiful *Algae* care if they are loosened from their moorings and tumbled about in the sea. They appear to thrive as well when riding about on the waves as when they are anchored by these hold-fasts to rock or reef or shell. With this good magnifying glass you may be able to discern some of the cells by which my *Algae* draw their nourishment from the water. You must know, my mermaids and mermen, that these wonderful plants which rival in delicate beauty the plants of the terrestrial gardens, are composed of a kind of little cell too fine to be seen without a good microscope. It is as if Nature, which, my children, is but another name for the great Creator, would teach us the wonders that can be made with a thing so small, so simple, as a little cell.

"What we call a stem in sea-plants is but a

lengthened contraction of cells. What seem to be leaves are these same little cells expanded. The so-called leaf and stem are more properly 'fronds,' and though so abounding in beautiful colours as to vie with our land flowers, these *Algae* never blossom and never bear seeds, but are reproduced by cells and spores; the higher by a kind of spores which in a way are analogous to seeds; and the lower *Algae* by cells akin to buds. These when ready to live by themselves, separate from the other cells, and float away and become independent sea-plants. Pretty deep water this for you, my little mermaid," said King Neptune, nodding to Polly, "but you shall have a sea-garden of your very own in that aquarium in my grotto.

"We find," he continued, "that different parts of the ocean have their peculiar plants, but not many can grow below five or six hundred feet, for even sea-gardens need the light of the sun, and sea-plants, although made of

a simple cell, somehow know enough to have preferences about the places they shall live, and often grow in great colonies.

"That frond which Polly holds, you see, is as fine as lace, 'mermaid's lace,' people call it," and King Neptune pointed his trident toward his smallest mermaid. "And I must tell you, though King of the Sea, I, myself, am amazed when I see such fragile things ride in upon stormy waves and laid upon the shore without a cell broken, when iron ships have been dashed to pieces by the same pounding, rolling billows.

"But these gay ribbons and wide beautiful pieces of a leather-like substance are from plants having a large place in the sea-gardens. They are called Kelp, and are the coarser and really the most common of sea-plants. They often grow in tropic-like jungles in the great sea-valleys and bear fronds that are a yard in length. Some varieties grow tall and wave in palm-like forests. There are other long coil-

ing tangles which float about in the sea and are tossed and twisted into mighty cables as large as my body and hundreds, even thousands of feet long. Like monster sea-serpents they are tossed by the waves, showing burnished coils of purple and bronze and black.

"Oh, they are wonderful—wonderful—these great sea-plains of mine, and my mountains and valleys where no mortal foot ever walks and no mortal eye ever looks." King Neptune dropped his trident and as Don handed it to the Sea-King he doffed his cap and knelt on one knee as he had seen knights in pictures kneel before kings.

"Please, King Neptune, tell me what this little dried up piece of queerness is. I found it in this dry tangle of sea-weed," said Gladys.

"Oh, that was one of my deep sea lanterns when it was alive," King Neptune replied. "You should see our electric and phosphorescent lights and flashing lanterns. None of your Fourth of July fireworks and no electri-

cal displays can begin to compare with those that glorify my ocean world," and King Neptune sighed as if at the thought of what they were losing. "My lanterns down in the ocean are real *living* lanterns. They hang in coral trees and on ocean crags and in sea-weed gardens and hidden grottos. Even my little mermaids' feathers and sea fans were once set thick with jewels which flashed and dazzled more than any jewels that ever you saw; and the jewels that once decked your fans and feathers were *living* jewels. What do my mermaids think of that?"

Nodding to Olaf he said, "How would my merman feel when diving among old wrecks if a flashing fish or a living torch came sailing up to him, and if the waves looked like waves of liquid fire? That is the way it often is in my ocean underworld.

"Really, my dears, in an hour I can hardly begin to tell you of the wonders of my kingdom. Another day, with new caps of magic,

we must make another trip. My mermen must ride their dolphins, and you, my little mermaids, must go with me in my fine sea-chariot drawn by steeds with golden manes and brazen hoofs."

"Oh, I've read about those horses in my book of old Greek tales!" interrupted Don, the scholar.

"Aye, they have been famous for ages," said Neptune. "You should see how proudly they tread the waves; and how gaily the untamed creatures of the deep play about my chariot. There are other wonders in my realm that are quite as interesting as my sea-gardens. But our magic hats are wilted, and I hear a Triton blow his sea-horn." Another minute and Neptune was nowhere to be seen, and only a sea-green parasol with three prongs on the end of the handle lay in the chair under the pine tree.

THE END