

The Mary Frances Garden Book



Adventures Among the Garden
People ~ by Jane Eayre Fryer

PART TWO

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CHAPTER XXII

THE CHILDREN'S MONEY-MAKING PLANS

THE children were in the garden, pulling weeds and "cultivating."

The little plants had come up quite a way through the soil.

With her hoe Mary Frances was drawing little mounds of earth quite high around the stems of the plants.

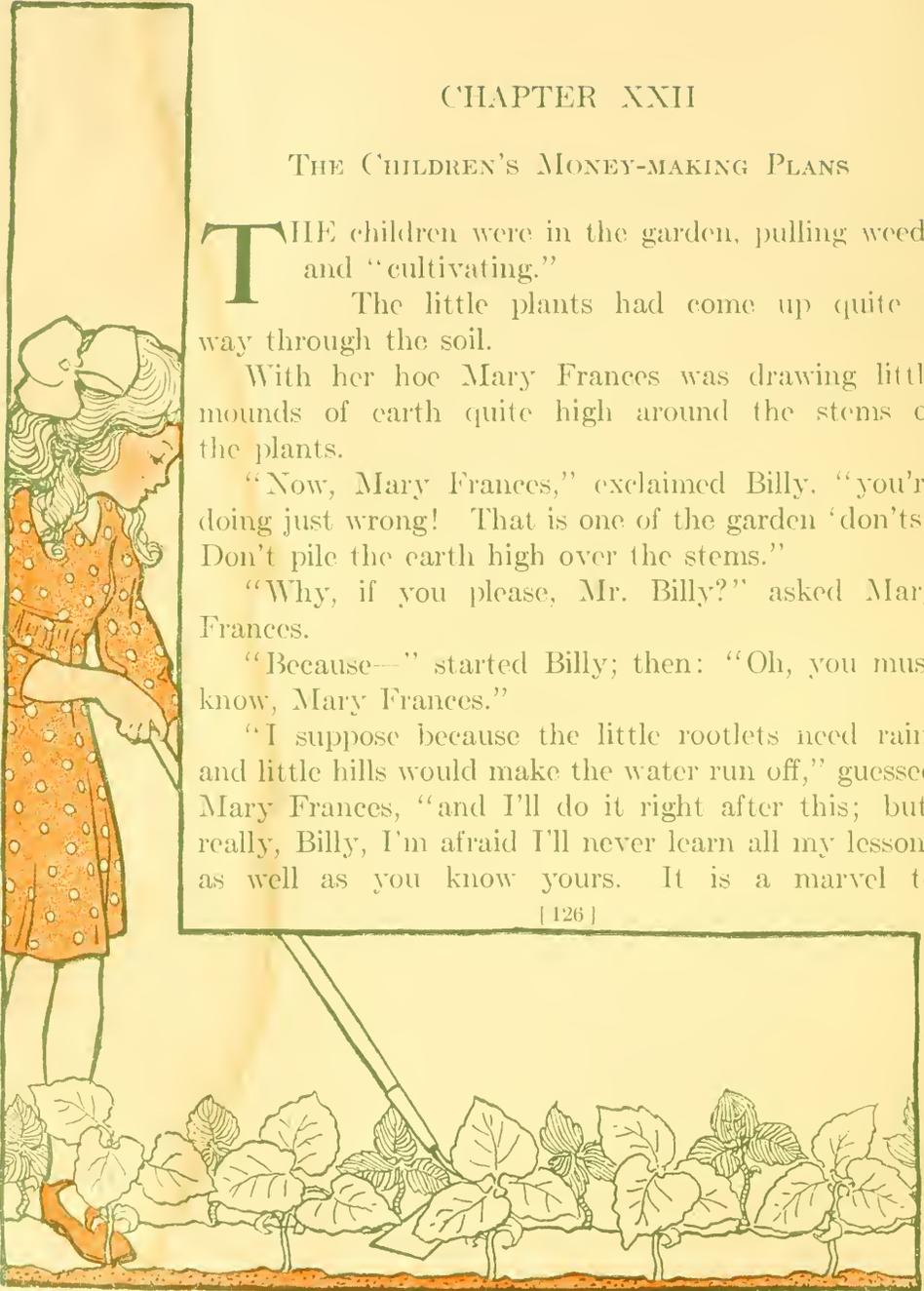
"Now, Mary Frances," exclaimed Billy, "you're doing just wrong! That is one of the garden 'don'ts.' Don't pile the earth high over the stems."

"Why, if you please, Mr. Billy?" asked Mary Frances.

"Because—" started Billy; then: "Oh, you must know, Mary Frances."

"I suppose because the little rootlets need rain, and little hills would make the water run off," guessed Mary Frances, "and I'll do it right after this; but, really, Billy, I'm afraid I'll never learn all my lessons as well as you know yours. It is a marvel to

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me how much you know. How you must have studied!"

"Humm!" said Billy, hoeing away. "I did study; but, somehow, I like gardening so much, it didn't seem hard work."

"You must have worked hard, though, or you wouldn't have won that garden prize of five dollars at school. Billy, you must feel rich! What are you going to buy with it?"

"I don't think I'll buy anything with what I have left; it seems fine to me to just keep it in my bank account."

"Oh, dear," sighed Mary Frances, "I wish I could make some money—not just save some of what is given to me."

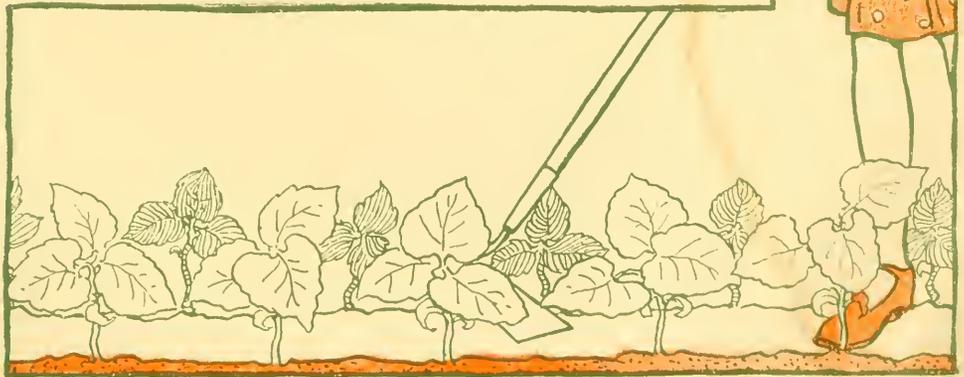
"Why don't you?" asked Billy.

"Why don't I what?" Mary Frances looked up from her work.

"Make some money," said Billy.

"How could I?" asked Mary Frances in bewilderment.

"Why, sell some of the vegetables you raise in the garden."



"Oh, Billy! Billy!" cried Mary Frances. "Do you suppose for a minute I could?"

"Course you could," answered Billy, "if I helped you, especially. I would like some spending money myself. Suppose we go into partnership?"

"Oh, let's!" cried Mary Frances. "How much better than trying to do such a thing alone! And I wouldn't want you to help me unless we divided the profits."

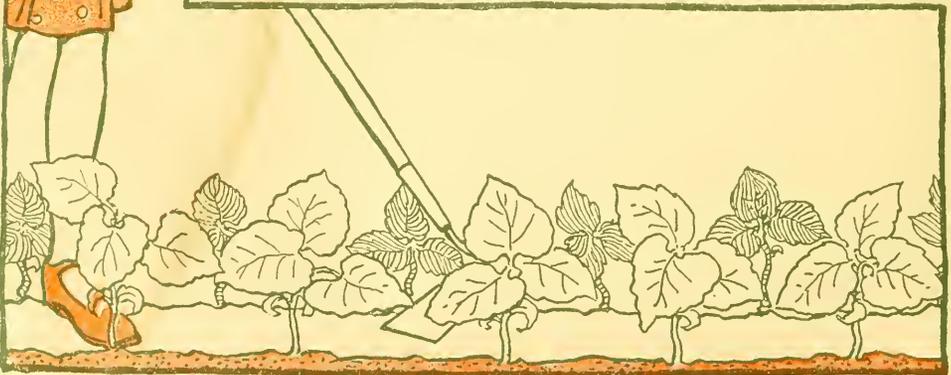
"And I wouldn't want to help you on any other basis," agreed Billy.

"But," exclaimed Mary Frances suddenly, "what about your own garden? You'll not need any partnership with me. You yourself will raise all you can sell."

"Have you noticed what I have growing there, Mary Frances?"

"Billy," said the little girl shamefacedly, "I haven't. I haven't noticed at all. How selfish I am!"

"Well," laughed Billy, "I don't mind at all, so you needn't feel bad, but I'll tell you. Chiefly rhubarb and asparagus; and they are both plants which



need two years, or three, before they may be disturbed, so you see why I'm so generous with my offer."

"I understand now, Billy," smiled Mary Frances. "My, won't you be rich when the rhubarb and asparagus are ready to sell!"

"I do expect to make some money," said Billy. "Father said he would pay me something for what is used by the family. It cost quite a sum to buy the little plants I set out—all I spent of the prize money was for them."

"Well, I certainly am glad you will help me, Billy," said Mary Frances, falling to work.

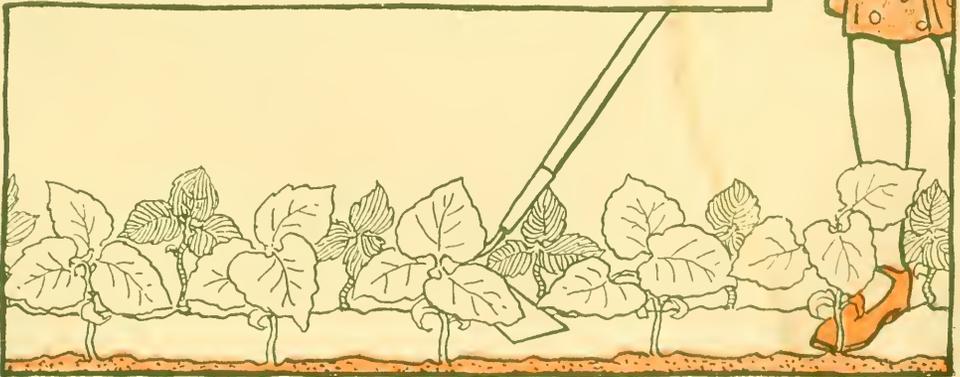
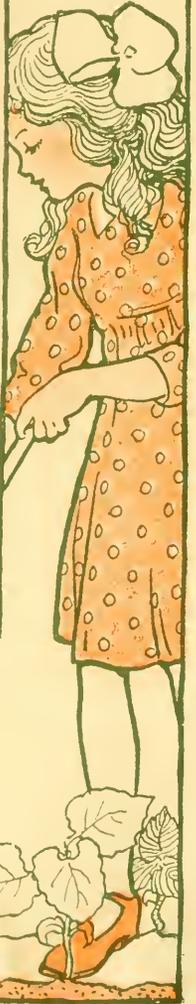
"All right; then it is settled," Billy said. "It won't be long before that lettuce and those radishes will be some size."

"But the parsley bed has shown only the tiniest little green leaves here and there! I wonder if it's never going to come up!" exclaimed Mary Frances.

"It often takes six weeks for parsley to germinate," explained Billy.

"Germinate?" inquired Mary Frances.

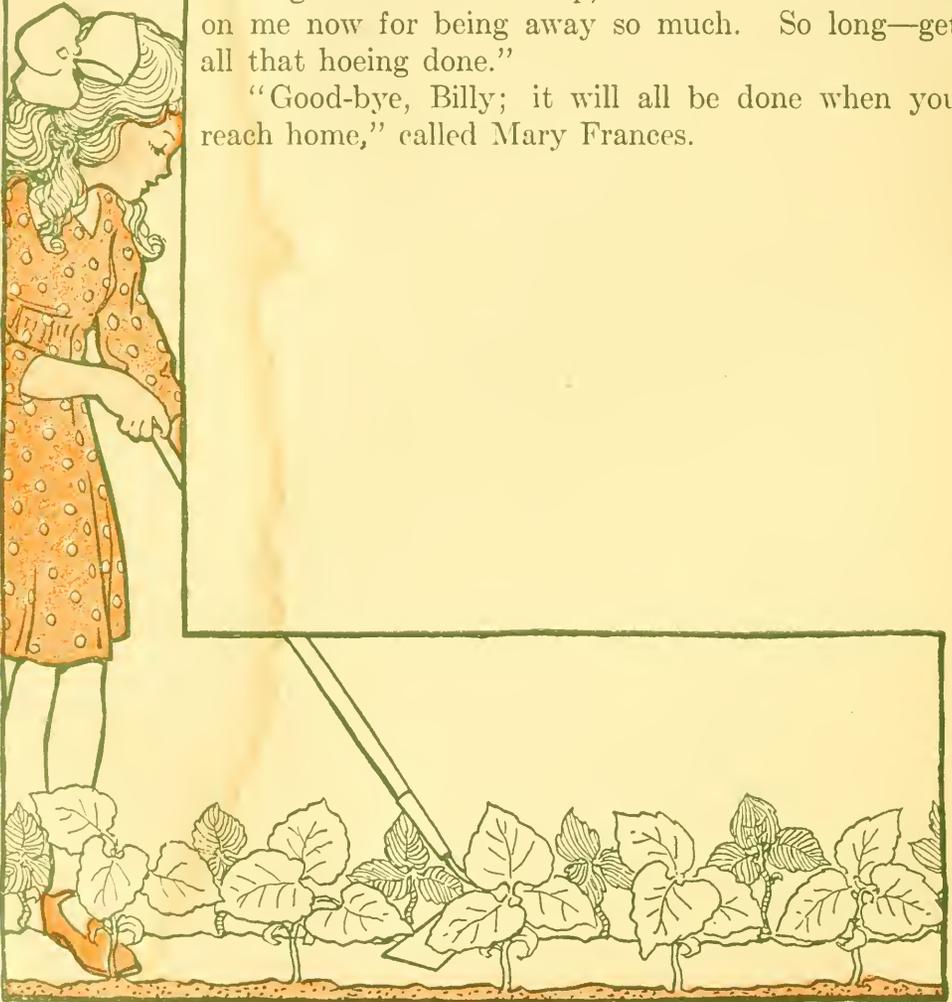
"Yes," answered Billy, "for the seeds to grow—start up, you know—wake up from their sleep."



"Oh," said Mary Frances, "I understand." Then suddenly, "Oh, Billy, I can scarcely wait until we can begin to sell things! I believe, I really believe I can cut some flowers to sell!"

"Certainly you can if they are beautiful enough!" said Billy. "Well, I must make a start or else I'll never get over to the camp, and the fellows are down on me now for being away so much. So long—get all that hoeing done."

"Good-bye, Billy; it will all be done when you reach home," called Mary Frances.



CHAPTER XXIII

MR. HOP TOAD HOPS IN

SHE worked away very hard for half an hour. "My," she thought, "this is such warm work I guess I'll take a little rest," and she sat down under the tree nearby.

She was just going to sleep when she thought she heard someone speak. Yes, it was Feather Flop, and he seemed to be arguing with someone.

"He wouldn't talk to a stranger," thought Mary Frances, "I wonder who it is. I don't dare peep, for fear they'll stop talking if they see me."

Pretty soon the voices came nearer.

"I tell you," Feather Flop was saying in a boastful tone, "I tell you I am of the greatest benefit to the garden."

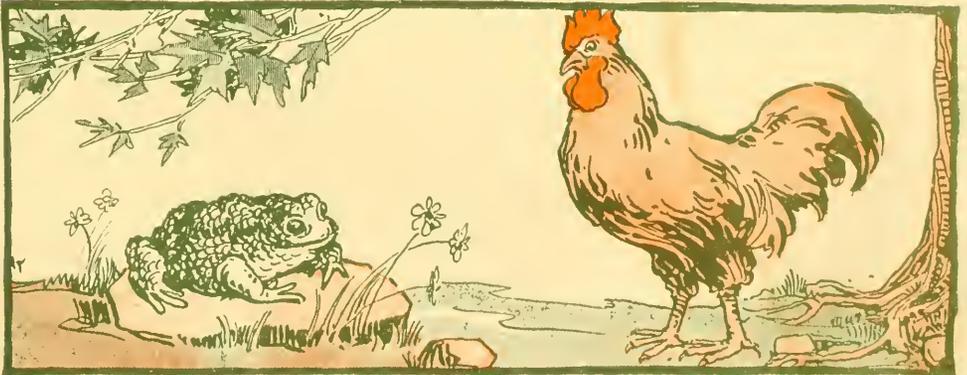
"If so, why so?" The question was asked in a funny, croaking voice.

"If so, why so?" mimicked Feather Flop. "Because it is so. So there!"

"Yes, certainly, if saying so makes it so," replied



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the voice. "But it is not so in my opinion. For instance—pardon me till I catch that fly—how many snails do you imagine I have eaten today?"

"Oh, I don't know," said Feather Flop; "but I do know this. I know I am the biggest benefit to the garden."

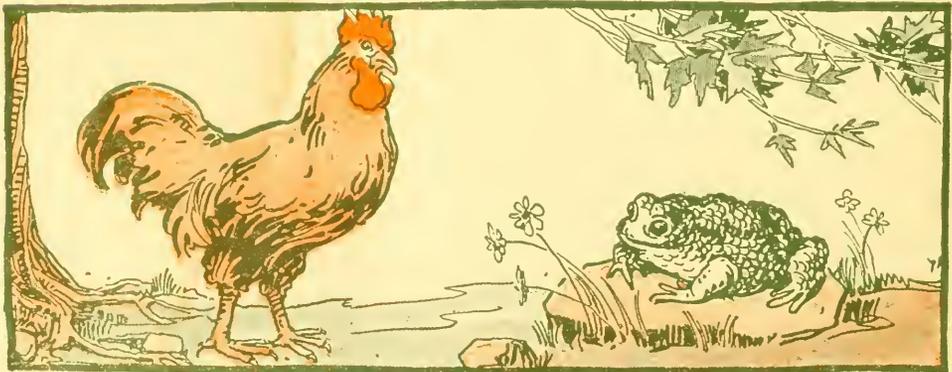
"I beg pardon, sir," answered the other; "I think I can easily prove I am the biggest benefit to the garden."

"Cluck! Caw!" exclaimed Feather Flop. "You mean you are the biggest toad in the puddle, Hoppy, you poor old toad!"

"Ho! Ho!" thought Mary Frances. "So it's a hop toad! I just believe it's that big fellow that lives under the stepping stone. I think I'd know him. I believe I'll peep!"

She looked cautiously around the tree. "It is! It is that same fellow I really believe! My, I wish I could ask him some questions!"

"Indeed, I do not mean anything of the kind, Mr. Feather Flop," retorted the hop toad, and Mary Frances could see his throat swell with indignation. "I mean that I am actually and truly one of the most helpful living things to have in a garden."



"Now, now, don't get angry," begged Feather Flop, "I want to hear about that! I want to find out, Hopy, how you are more beneficial to the garden than I am."

"Well," answered the hop toad, blinking his eyes with a satisfied smile, "it's this way: suppose I begin with the baby toads——"

"A crow told me they taste very good," interrupted Feather Flop.

"For shame!" whispered Mary Frances. "Isn't that awful of Feather Flop!"

The rooster must have heard her, for he suddenly bowed his head, saying, "Oh, I beg your pardon, Hopy—really I do! Please excuse me!"

"I suppose you don't know any better manners," answered the hop toad, "so I'll have to excuse you, and I'll tell you—if you don't interrupt—"

THE STORY OF THE HOP TOAD

My mother told me that one lovely day early in May she awoke from her winter's nap. Oh, yes, that's what we do in winter—sleep in the ground.

Well, my mother awoke, and went happily hopping down



to the meadow pond to lay some eggs. Perhaps you don't know them when you see them—toads' eggs. They look like tiny black pills in strings of transparent jelly. This jelly either drops to the bottom of the pond or fastens to water weeds.

TADPOLES

The eggs grow larger and larger and pretty soon become baby toads, or tadpoles.

Well, I was one of the tadpoles that spring, and my brothers and sisters and I soon ate some of the jelly, and then some of the delicious slime in the pond.

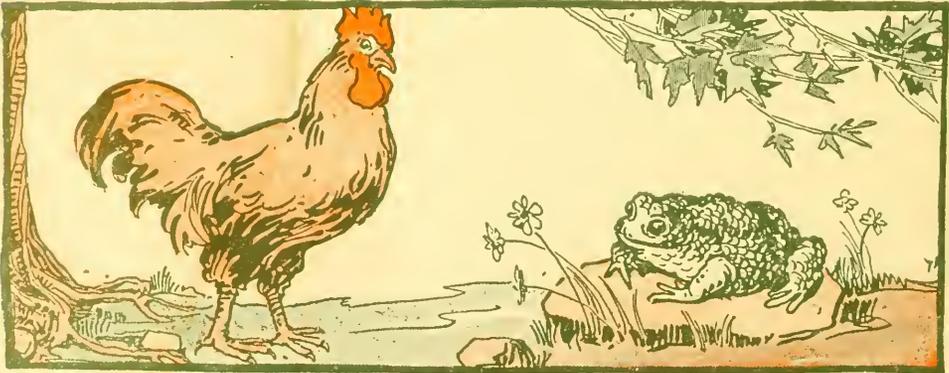
Yes, we lived in the water and breathed somewhat the way fishes do.

When we were about ten days old, our mouths grew much stronger and our jaws grew horny so that we could bite off pieces of plants.

How lovely it was! I can remember now how cool and pleasant it felt to swim about in the pond. We had long flat tails which we used for swimming.

Now, Feather Flop, if you interrupt again I shall not finish my story! No, we didn't eat our tails; of course not. Our tails were absorbed into our bodies to help with their growth.

When we were about an inch long we had but stump tails, and found we had to come to the surface of the water for more air every day, we decided we were no longer tadpoles, but real hop toads. We swam to the shore of the pond and hopped away.



TOADS' ENEMIES

Many of my little brothers and sisters, alas! were eaten by snakes, and—yes, Feather Flop—gobbled up by crows.

No, Feather Flop, dogs wouldn't bite us, because—do you see the warts on my back? They are very useful to me. When I want to disgust an enemy, I can send out of those warts a disagreeable, biting secretion, and I am dropped pretty quickly.

No, of course, we cannot make warts on people's hands. No toad ever did anything of the kind! It's a horrible untruth. Certainly we seem cold to people's touch. That's because our blood is of the same temperature as the air. Their blood is warmer.

Well, as I said, almost any enemy drops one of us grown-up toads quickly but snakes! They don't seem to mind us at all. Ugh! when I see one I either hop away with all my might, or I bury myself in the earth. No, Feather Flop, I can't teach you how! I do it with my hind legs. See how I can kick!

There are two more ways in which we escape our enemies.

In the first place, if you notice carefully, you will observe that I am almost the color of the leaves on which I am sitting. If I should hop out there on the path, my coat would change in a short time to nearly the color of the path. Oh, I do not care to try it now. The sun is shining there, and I certainly do not like sunlight and heat! The fact of our color being nearly the shade of our surroundings prevents enemies from seeing us. Yes, you are right, we shed our skins several times a year, and we



swallow them. We generally do this when no one is looking. The other way we escape notice is the fact that we feed mostly at night, while our enemies are asleep.

HOW TOADS HELP THE GARDEN

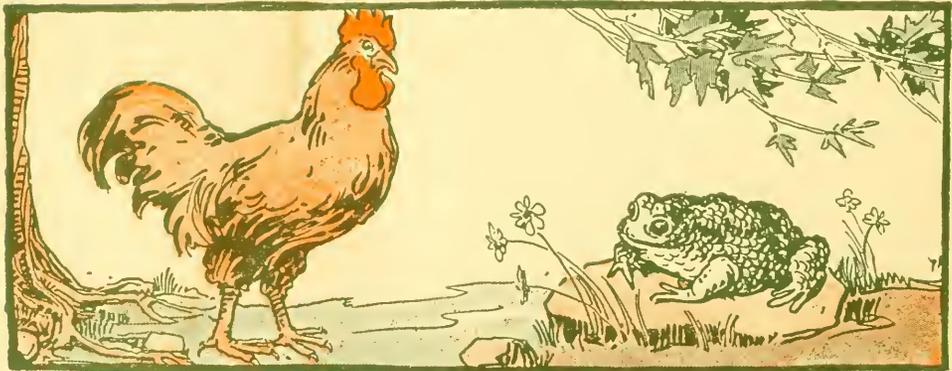
Speaking of food, Feather Flop—have you eaten any of those delicious tent caterpillars? No? Well, you should try some. Don't you like them? They stick to your throat? Oh, I didn't know that, but I've noticed that you didn't seem to eat them, nor "thousand-leggers." That's the reason I said I was of more benefit than you to the garden.

Just listen until I tell you what I had this early morning for supper. No, not breakfast! I told you I feed at night. Early morning brings my supper time! Well, these are what I had:

- *6 cutworms
- 5 thousand leg worms
- 6 sow bugs
- 9 ants
- 1 weevil
- 1 ground beetle

We eat also snails, injurious beetles, grasshoppers, worms, potato bugs, and lots more of harmful creatures. Well, ants and spiders may be useful, but ants are a question, and we eat

* This list is taken from U. S. Farmers' Bulletin No. 196, Usefulness of the American Toad.



few spiders. Spiders are lots of fun to catch, though. See, there is one! See how my tongue shot out at him? My tongue is fastened to the lower jaw at the front of my mouth. You didn't see it? Well, I suppose we toads do use our tongues pretty quickly. They have a sticky substance spread over them, so we're pretty certain to make our "catch."

"Now, Feather Flop, I think I've told you almost everything. Is there anything else you'd like to know?"

Mary Frances had been listening with all her ears.

"My, there are things I'd like to know," she thought. "How I wish he'd talk to me!"

"No," said Feather Flop in a crestfallen voice, "I don't think of any. I certainly must acknowledge that you are usefuller than I thought!"

"Thanks! All right!" replied the toad, taking a hop.

"Hold on, please, Hoppy!" Mary Frances ventured to call.

The toad turned.

"Please, Mr. Hop Toad," she begged, "please will you tell me something? I've overheard your



wonderful story. If it is not too inquisitive, may I ask why your throat puffs all the time?"

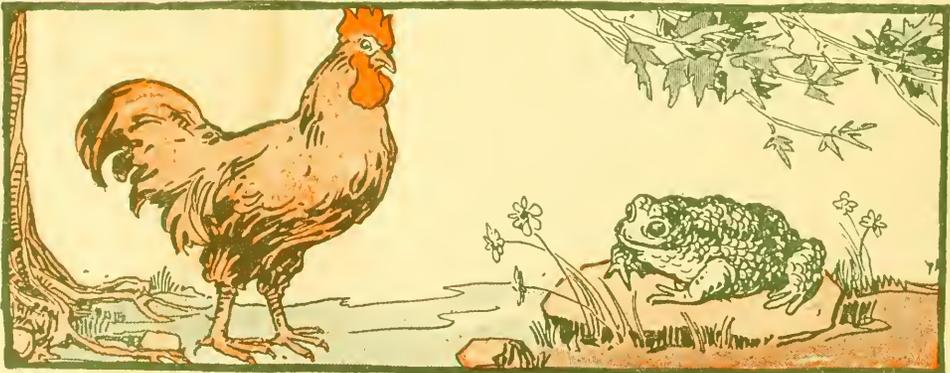
"Certainly, certainly," croaked the toad, "my voice is hoarse, Miss, but I'll do my best to answer. You see, we toads have no ribs to use when we breathe, so we have to swallow every bit of air we use."

"Oh," said Mary Frances, "that is it. I am so much obliged to you for telling me. Here is a fish-worm—or do you call them angle-worms, or earth-worms?—for you!"

"A fish-worm!" exclaimed the toad. "That is fine. Throw it down, please. No, that is the wrong end toward me. Fish-worms wear rough rings along their bodies which hurt the throat if swallowed the wrong way foremost. They're pretty large to get down, so I may have to rub it down my throat with my hands."

This the funny little toad did, and after getting it down, patted its little stomach. "My, it was so good. I shut my eyes while I swallowed!" he said.

Mary Frances laughed outright. "I'm glad I



gave you a treat," she said. "I wish I knew something else I could do to make you happy."

"Then just take a stick and scratch my back, please."

Mary Frances did as requested.

Feather Flop looked on all the while without a word. At length he blurted out, "You told me, little Miss, I think, that fish-worms were good for the garden—that they stir the soil and make it light and porous. I've never eaten one since you told me that!"

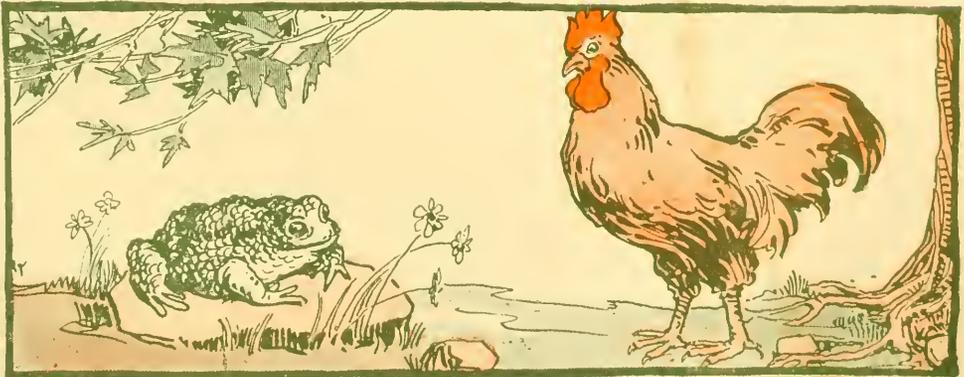
He looked scornfully at the toad.

Mary Frances smiled. "Oh, Feather Flop, indeed I thank you, but you see, we don't need so many of them. You could take one once in a while."

"I must be going," said the toad, "and I thank you, Miss. You're much more polite and kind than some people I've known!" glancing at the rooster.

"He means the boy that stoned him," said Feather Flop.

"Excuse me, I did not refer to him," said the toad; "but really, boys are terribly hard on us!"



And think of all we do to help them. We eat the dreadfully destructive insects."

"I wonder if my brother Billy ever—" began Mary Frances.

"No, not any more," said the toad. "I've lived here in this garden five years and it's over a year since he's troubled any of us."

"He never will again," promised Mary Frances. "I shall certainly tell him your story."

"Good-bye, and thank you very much!" suddenly exclaimed the toad, hopping away very rapidly.

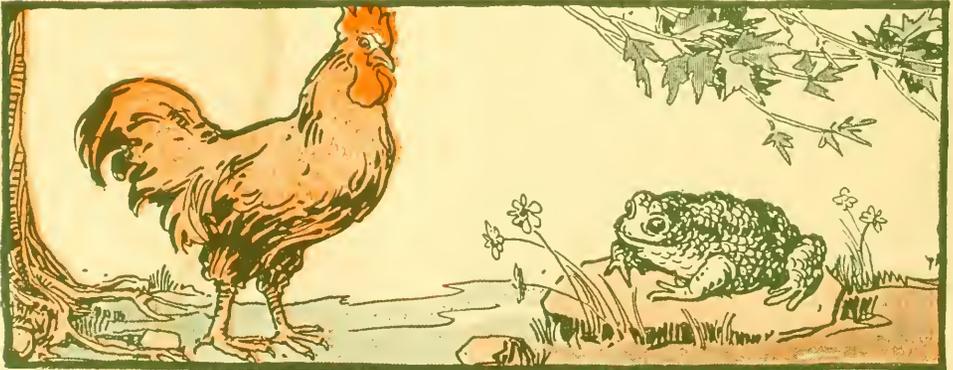
"Oh," called Mary Frances, "I want to ask you something else. Won't you talk to us again?"

This time the toad did not turn around nor answer a word, but hopped more rapidly than ever.

"I can catch him!" exclaimed Feather Flop, "and I'll peck him as hard as ever I can, too, for treating you that way!"

"Don't you dare, Feather Flop," called Mary Frances, running after him. "I'm ashamed of you!" catching him up.

"Oh, dear," sighed Feather Flop, "and I wanted





to help you so much! I am always doing something wrong!"

"Listen, Feather Flop," explained Mary Frances, "that probably frightened him so he'll never speak again."

"I'll be to blame for that, too," mourned Feather Flop. "Oh, I'm sorry, so sorry."

"Never mind, my friend," said Mary Frances; "I appreciate the kindness you meant to show even if you made a mistake."

"Are you sure you forgive me, little Miss?" asked the rooster.

"Quite sure," answered Mary Frances. "But I can't promise about the hop toad!"

"I don't care a hop about Hoppy," said the rooster, "just so you forgive me."

"I guess a rooster, even if as clever as Feather Flop, can't understand such things," mused Mary Frances to herself.

"Please be polite to him for my sake, then," she said.

"I will! indeed I will!" promised Feather Flop.



CHAPTER XXIV

MR. CUTWORM, THE VILLAIN

IF he mentioned cutworms," said Billy, as Mary Frances finished telling him the story of the hop toad, "If he mentioned cutworms among the insects he eats, I certainly am glad to make his acquaintance. Will you introduce me to him?"

"Certainly I will, Billy; come right down into the garden."

The children looked all over the place for the hop toad, but were unable to find a trace of him.

"I remember," said Mary Frances, "that he told me he slept in the day time."

"Oh, of course," replied Billy, "that's the reason we don't see him. I might have thought of that!"

"Hello, he's been lazing on the job though," he exclaimed. "Look at those three young tomato plants, all cut off near the roots. Neat work, that. Mr. Cutworm the Villain's, I'll bet!"

"Oh, dear! Billy, won't they grow up again?"

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"Not much!" exclaimed Billy. "No, indeed; we'll have to put in new ones in their place. "We've had so little trouble with cutworms that I forgot to take precaution."

"What's that?" asked Mary Frances. ▽

"Precaution—why, means to keep him from the plants. We could have used—

PAPER COLLARS TO PROTECT PLANTS FROM CUTWORMS

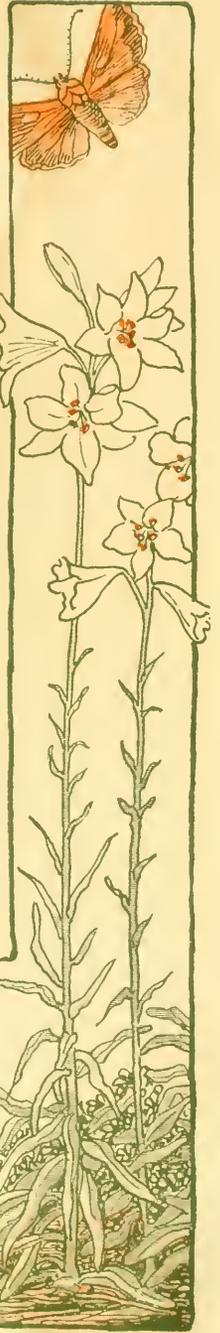
Cut strong paper into rectangles about $2\frac{1}{2} \times 5$ inches. Wrap a paper loosely around the stem of growing tomato plants and other tender stems before packing the earth around them. Let the paper extend about an inch above the ground, but make it narrower if it covers the roots.

"Oh, how funny," laughed Mary Frances, "for plants to wear paper collars."

"They would cheat Mr. Cutworm out of several good meals," said Billy. "It's provoking to find plants cut off that way. You see, the worms do their villainous work at night!"

"Oh, do they live under ground all the time?"

"No, we learned in school that they are the larvæ, or young, of a certain night-flying moth. They live



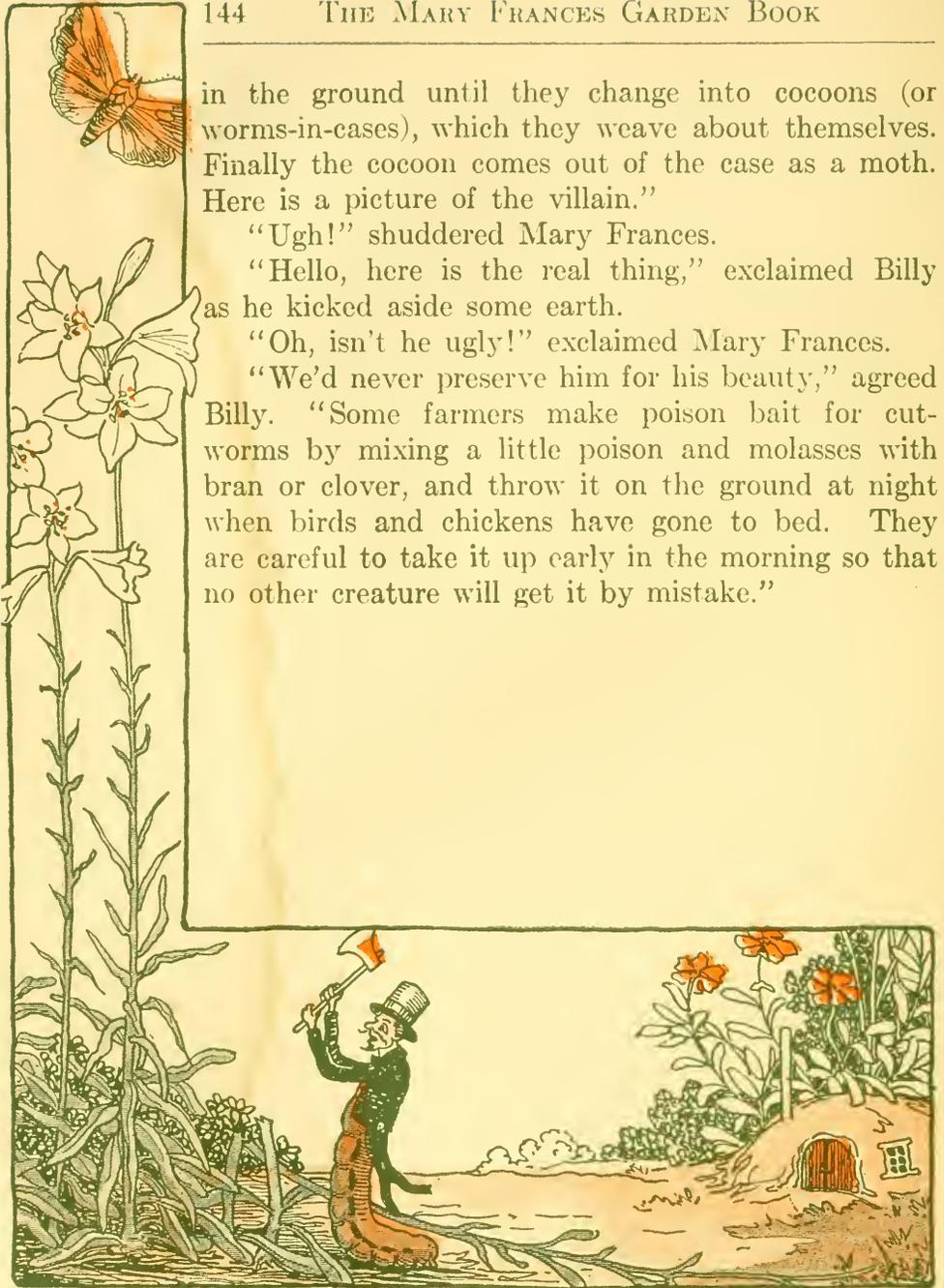
in the ground until they change into cocoons (or worms-in-cases), which they weave about themselves. Finally the cocoon comes out of the case as a moth. Here is a picture of the villain."

"Ugh!" shuddered Mary Frances.

"Hello, here is the real thing," exclaimed Billy as he kicked aside some earth.

"Oh, isn't he ugly!" exclaimed Mary Frances.

"We'd never preserve him for his beauty," agreed Billy. "Some farmers make poison bait for cut-worms by mixing a little poison and molasses with bran or clover, and throw it on the ground at night when birds and chickens have gone to bed. They are careful to take it up early in the morning so that no other creature will get it by mistake."



CHAPTER XXV

BIRDS AS PLANTS' FRIENDS

“**N**OW, Feather Flop said—” began Mary Frances; “I mean, if Feather Flop had been in the garden there wouldn’t have been so many cutworms.”

“Mary Frances!” exclaimed Billy. “How ridiculous! You don’t seem to understand that that old rooster would have eaten up all the young plants himself!”

Mary Frances bit her lip to keep from laughing as she saw Feather Flop peeping around the tree in back of Billy.

“If that rooster were a robin or a wren it would be different,” went on Billy. “Just listen, Mary Frances!” pulling a paper out of his pocket.

“‘One robin has been known to feed his family five yards of worms a day.

“‘A chicka-dee will dispose of 5500 eggs of the canker-worm moth in one day.

“‘A flicker eats no less than 9000 ants a day.



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“A pair of wrens have been seen to carry 100 insects to their young in an hour. They are especially fond of plant lice and cutworms.

“Little humming birds lick plant lice off foliage with lightning rapidity.

“The yellow-billed cuckoo eats hundreds of tent caterpillars in a day.

“Seed-eating birds destroy myriads of seeds of destructive weeds—actually eating hundreds of tons of seed.

“The Department of Agriculture of the United States estimates that the tree sparrow alone saves the American farmer \$90,000,000 in a year by eating seeds of weeds.’”

“That isn’t the English sparrow,” laughingly interrupted Mary Frances.

“No,” replied Billy, “not so much can be said in its favor.”

“How do people know what the different birds eat?” asked Mary Frances. “Did someone watch to see what each different bird took for a meal?”

“No.” Billy referred to his clipping. “Scientists have examined the contents of the stomachs of the



birds, and have learned what food each kind of bird uses. There was a time when people imagined that robins stole so many cherries and berries that it was a good deed to kill them. Now they have found that they destroy so many injurious insects that they do not begrudge them a few cherries. Besides, if mulberry trees are planted nearby, they will prefer their fruit to the cherries."

"Oh, Billy," cried Mary Frances, "isn't it wonderful! Not only do birds help us by destroying harmful insects and seeds, but they help us by their beauty. I believe they are the most beautiful of living things! They could have helped us just as much, and have been as ugly as—cut-worms."

"Yes," laughed Billy. "I believe that is so, but it takes a girl to think such things out. The most remarkable fact to me, however, is that without birds we would die of starvation. It has been estimated that if they were absent for one season alone, the United States would lose over \$300,000,000, and if they disappeared entirely, agriculture and farming would be impossible within a few years."





“Bees and birds,” commented Mary Frances softly, “keep us from starving. How wonderful it all seems. Why, Billy, it must have all been planned out when God made the world!”

“I have thought of that myself, Mary Frances,” said Billy; “it’s one of those thoughts a fellow doesn’t often speak out loud. I don’t know why.”

“Everybody ought to take care of birds,” went on Mary Frances. “Surely the reason they don’t, is because they do not understand how wonderfully they help us. Do you recall Miss Carey’s poem—‘An Order for a Picture’? I learned a part of it in my literature course last winter:

* * * * *

“‘Afraid to go home, sir; for one of us bore
A nest full of speckled and thin-shelled eggs,
The other, a bird, held fast by the legs,
Not so big as a straw of wheat:
The berries we gave her she wouldn’t eat,
But cried and cried, till we held her bill,
So slim and shining, to keep her still.



“At last we stood at our mother's knee.

* * * * *

You, sir, know
That you on the canvas are to repeat
Things that are fairest, things most sweet,
Woods and corn fields and mulberry-tree,
But, oh, that look of reproachful woe!
High as the heavens your name I'll shout,
If you paint me the picture, and leave that out.' ”

“I know just what that means,” said Billy, “for one day—only I've never told it, for I knew how it would grieve mother—I killed a little wren. I was quite a little chap and had no real intention of doing such a thing. I aimed a stone at the little thing, and down it came—dead.”

“Well, Billy, there's this comfort,” said Mary Frances; “it didn't suffer. That's very different from injuring it and letting it live on in agony.”

“Yes,” said Billy, “you see I didn't understand; boys don't, I guess.”

“Birds and bees,” Mary Frances repeated, “keep



us from starving. I suppose you know of many other beneficial animals or insects."

"Oh, Billy, let's have lots of birds in our garden!" she went on.

"Why, how?" asked Billy. "Perhaps we could put food out for them."

"Yes, but I wasn't thinking of that. I thought maybe we could put houses where they would build."

"Of course," replied Billy; "and we could keep a small bath tub full of water for them."

"What fun!" exclaimed Mary Frances. "Billy, do you know how to build the right kind of houses for each different kind of bird?"

"No, I do not," answered Billy; "I know of only a few. They are the ones our manual training teacher showed us. I have some pictures right here in my book. It's queer I didn't think of them!"

"Let me see," cried Mary Frances. "Oh, Billy, will you make some later on?"

"I'm to make them in school next term," explained Billy. "Mr. Carpenter, our teacher, told me about these houses one day when we were out walking. We



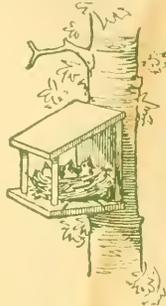
happened to talk of what Professor Weed had told us in a lecture on birds, you see."

"Do let me read about these houses," begged Mary Frances, looking over his shoulder at the picture of—

A ROBINS' SLEEPING PORCH

Robin Redbreast will not live in an enclosed house, but desires merely a shelter where the family can have plenty of fresh air.

"I believe in living out-of-doors," says Mrs. Robin Redbreast, "and I shall not send the children to school in a schoolhouse, no matter how sanitary. They shall be educated in the open air. There is a lot more to be learned outdoors than indoors."



ROBINS' SLEEPING PORCH

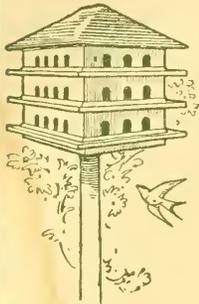
A BUNGALOW FOR WRENS

Jenny Wren and her husband like a little perch to rest upon before entering their home. In order to keep the English sparrow from being inquisitive and troublesome, make the entrance only 1 inch in diameter where Mr. and Mrs. Sparrow cannot enter.

WRENS' BUNGALOW

"They are not a bit nice neighbors," fusses gentle Jenny Wren. "They pick a quarrel over nothing, then peck our family to pieces if they can."





MARTENS' HOTEL

Do not charge Mr. and Mrs. Marten for lodgings. Instead be thankful that they bring their friends and relations with them, for Martens come in companies and love to linger where invited. They destroy myriads of insects.

THE BLUE BIRDS' COTTAGE



BLUE BIRDS' COTTAGE

These heavenly blue birds, with pinkish plumage on their breasts, add great beauty to our home gardens, and fortunate is the owner of the bird house which they select "rent free." They are desperately afraid of English sparrows, or more of them would tenant the houses round about the home garden. Blue birds eat up whole families of garden pests at a meal.

"My, aren't those bird houses dear!" said the little girl. "I hope we'll have one of each kind some day. Then we'll feel that our garden is well protected from injurious insects. Are there any other creatures which destroy them beside toads and birds?"



CHAPTER XXVI

LITTLE LADYBIRD

“CAN’T say with certainty,” replied Billy, “until I look in my note book.”

“Well, it’s just inside the play house, isn’t it?” asked Mary Frances.

“I’m getting rather tired, Mary Frances,” said Billy.

“Oh, go get it, Billy,” Mary Frances begged, “please do, bring it out to the garden bench—that’s a good fellow.”

“Well, if it were any other subject than gardening, you couldn’t persuade me, young lady; but I guess I’ll go.”

“There are lots of beneficial insects named,” he said, coming out of the play house, “but the one you know best is a different kind of a bird from the feathered——”

“I know! I know!” eagerly interrupted Mary Frances, repeating the old rhyme—

“‘Ladybird, Ladybird, fly away home!
Your house is on fire, and your children will burn.’”

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“Good!” exclaimed Billy. “Ladybird or ladybug; but why they are given so charming a name, I can’t imagine.”

“I can imagine, Billy. Have you ever noticed, besides being so very pretty, how neat they are; how ladylike they look when they fold their wing covers and tuck in their inside wings; and did you ever see them wash themselves? They do it so carefully! I don’t wonder at their being named Ladybirds.”

“Humph, Mary Frances, you certainly have an enviable imagination. I should say they were more fittingly named Possumbergs. Have you ever noticed how they ‘play possum’ when you try to pick them up?”

“Indeed I have,” Mary Frances laughed at the remembrance. “Maybe they do that to save their lives just as opossums do; but they are so very pretty that I’d call them Ladybirds for that reason alone.”

“Not all are pretty alike,” commented Billy.

“Why, don’t they all wear shiny red dresses with black polka dots?” asked Mary Frances.

“No,” smiled Billy, “some wear shiny black



dresses with red or yellow polka dots; sometimes the dress is yellow with black spots."

"Oh, isn't that interesting!" cried Mary Frances. "I never tried the rhyme on any but the red ones with black dots."

"I never 'tried' the rhyme. How do they act?" asked Billy.

"Well," laughed Mary Frances, "usually, if you blow your breath upon them, they fly away; if you just watch them, they generally turn around and run as fast as they can in the opposite direction from which they were going."

"Probably looking for food," said Billy.

"Probably running to save their children's lives." Mary Frances was quite indignant.

"Perhaps my notes will tell," said Billy, opening his note book again and beginning to read:

LADYBIRDS OR LADYBUGS

The Ladybird is a little beetle about a third of an inch long. There are many species of ladybirds; they all are of the same general shape, somewhat like a split pea, but much smaller. They are usually of brilliant shiny colors with spots of contrasting colors: sometimes red with black spots; sometimes black with



red or yellow spots, sometimes yellow with black spots. The young or larvæ of the ladybird are not in the least like their mothers. They are little black, rough, worm-like creatures with six legs, having reddish-yellow or rusty spots on their backs. Both the young and the parents are very helpful to the garden because they eat harmful insects—scale insects and aphids or green plant lice.

One species of ladybird which the California fruit growers brought from Australia has been the means of exterminating a scale insect very injurious to the orange and lemon trees of the Western coast. The larva of the ladybird turns into a hard encased pupa, and later into a full-grown ladybird insect.

“My,” exclaimed Mary Frances, “another garden friend! Why, Billy, one is never alone in the garden. There are always lots of friends about.”

“And enemies too,” said Billy. “Some time I’ll tell you about one of the silliest of enemies, which Professor Weed called an ‘animated honey drop’ or aphid.”

“Tell me now, Billy? Oh, do tell me now!”

“Not much! Not much! Some other time, Mary Frances. Do you think I’m an animated encyclopedia—always ready to deal out information, or do you think—? Oh, so long!”

Before Mary Frances could answer, Billy had disappeared.



CHAPTER XXVII

CURLY DOCK

“JUST in the nick of time,” said Billy as Mary Frances came racing with Eleanor around the front of the house. “Why, hello! who’s here? Excuse me, Eleanor, I didn’t know you were to arrive until this afternoon,” shaking hands with Mary Frances’ “best girl friend.”

“She wasn’t expected until afternoon,” explained Mary Frances, “but some friends of her father’s were coming this way in their car, so she’s here quite early. Oh, I’m so glad!” as she kissed Eleanor again.

“I wish we’d never moved away, Mary Frances,” said Eleanor, returning her embrace.

“You said I was just in the nick of time, Billy,” Mary Frances suddenly exclaimed. “Why, so is Eleanor. We can share the secret with her!”

“Another of Mary Frances’ secrets!” cried Eleanor. “Please tell me about it!”

“Oh, Mary Frances makes so much out of



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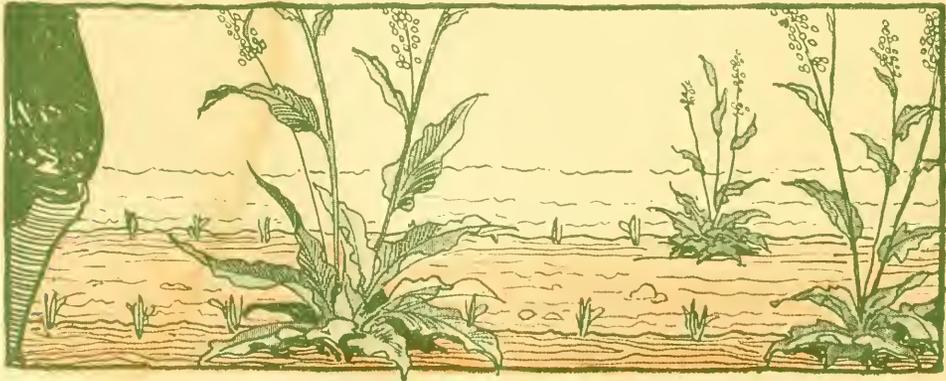
nothing," said Billy. "It's simply this: we're planting a garden, and don't want the folks to know it."

"That isn't all, Eleanor," said Mary Frances. "Billy is teaching me how to garden. He took a course in gardening last year, and he explains to me everything his professors taught him."

"Jiminy!" exclaimed Billy. "Everything! Well, not much! I'm trying to tell her just a little bit of what they tried to teach us fellows. By the way, doesn't Bob garden?"

Eleanor began to giggle. The children looked at her in surprise. Finally she answered: "Such gardening! Believe me—no garden can raise a crop of weeds equal to his. I must tell you what I was laughing at. Early in the Spring Bob planted in a box some seed one of the boys had given him, and Father allowed him to put it in the sunniest window. He watered and tended it, and finally set the little plants out. The fellows told him that he'd be surprised at the wonderful plants he'd get; that he could have them served as 'greens' for our dinner."

"What were they?" interrupted Mary Frances.



"Hush!" exclaimed Billy, who was much interested. "Eleanor will come to that soon."

"Well, the plants certainly did grow! They grew large, broad leaves, quite curly, but no one seemed to know what they were. One day Bob asked the farmer who sold us potatoes to look at his garden, and I'll never, never forget how that man laughed. He roared; he shook; he doubled up with laughter. He struck his knee with his hand, and tried to speak, but no words would come. Bob looked on at first with amazement, and then with anger, finally with disgust.

"'If you wouldn't mind telling the joke,' he said, 'we might share in the fun.'

"In a few moments the farmer spoke: 'Well, sir,' he said, 'that's the finest crop of curly dock weed I ever seen!' and he began to laugh again."

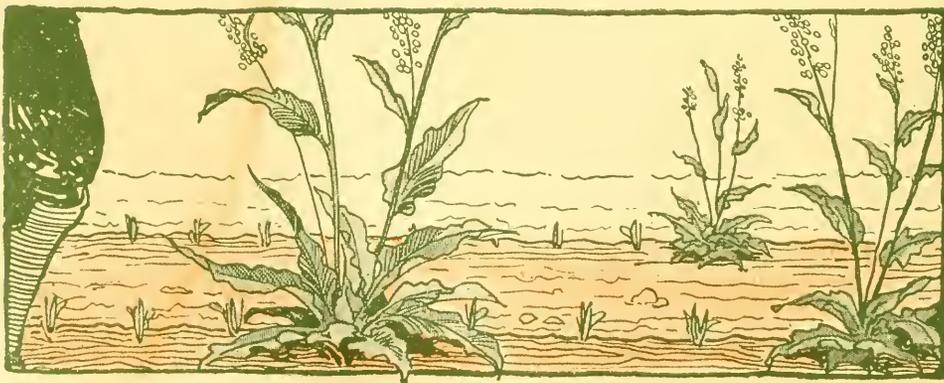
"My, I bet Bob was 'sore'!" laughed Billy.

"Yes, he was, but that wasn't the best of the joke," Eleanor went on.

"'I'll serve a mess of it to those fellows!' he cried. 'And Dick Willoughby's got to eat the most—even if I'm compelled to have the doctor there to keep him from being poisoned.'



“‘That would be a treat,’ the farmer said. ‘Curly dock makes one of the best “greens” in the Spring. Just boil the leaves until tender, and serve like spinach. Only, young feller, next time you want a mess, just come over and weed out my meadow. Don’t you take up your time and your pa’s land a-cultivating what grows wild and can be had without the asking.’”



CHAPTER XXVIII

THE STUPID HONEY DROPS—APHIDS

BILLY and Mary Frances enjoyed Eleanor's story very much, and laughed heartily over Bob's discomfort.

"Well, Eleanor," said Mary Frances, "you'll be able to teach Bob a lot about gardening if Billy will let you share the lessons he's been giving me. By the way, Billy, what did you mean by 'just in the nick of time'?"

"Nothing much," replied Billy, "only I wanted to show you some of the 'animated drops of honey' about which I spoke."

"Oh, where are they?" cried Mary Frances.

"What in the world do you mean, Billy?" Eleanor exclaimed.

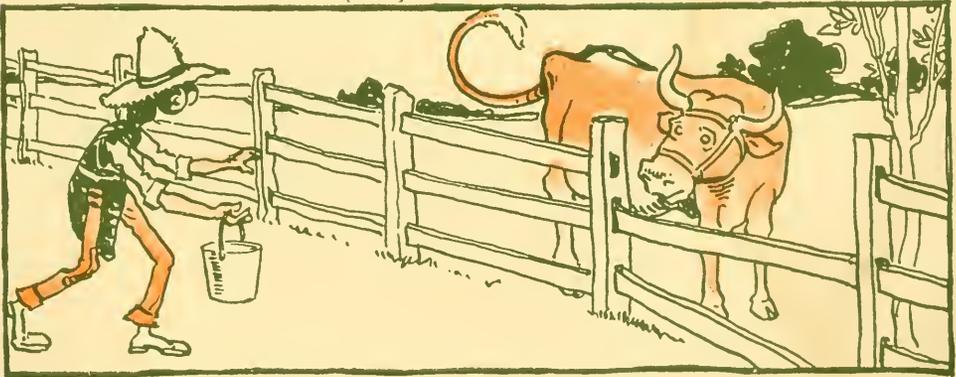
"Follow me if you want to know," commanded Billy, leading the way to one of his mother's rose bushes.

He lifted a long new branch.

"How funny the tip looks!" exclaimed the girls. "All bristling, like a burr."



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"Look more closely," said Billy.

"Oh, Billy," laughed Mary Frances. "Billy, it's not a green burr at all! It looks that way because of thousands of those little tiny green plant lice!"

"Yes," acknowledged Billy, "nothing but aphids. I'll now try to repeat a little of our lesson on—

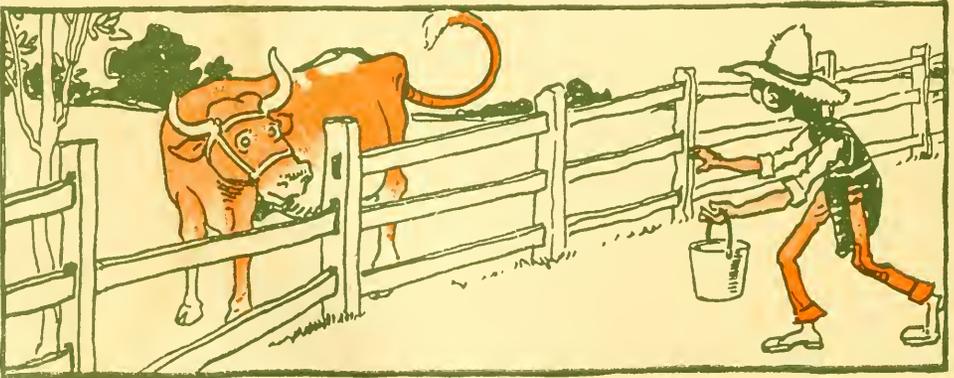
APHIDS OR PLANT LICE

There are several species of aphids, but those most commonly seen are little green ones.

Nearly all delight in feeding upon the sap of young tender* shoots. They thrust their tiny sharp beaks into the stem, and, with their hind legs or claws in the air, suck the juices into their soft little bodies. The sap is turned into honey-dew in their stomachs, and ants use them for their cows! But they give them honey, and not milk. Perhaps ants like honey-milk better than we like cow's milk. Aphids seem very insignificant. They are helpless little creatures, and are very easily killed. Indeed, they are so stupid they don't seem to know when they are being killed. Even though they are stupid, they do a great amount of harm in the garden, stealing the vital fluids of the plants.

They multiply so rapidly that their many enemies do not do away with all of them, so almost all gardeners use a "spray" to kill them.

* There are a few aphids which feed upon roots.



One of the most interesting of their enemies is the—

APHIS-LION

This little worm-like creature is hatched from the egg of the mother lace-wing, an airy green fly with light lacey wings. She places eggs on a leaf nearby a group of aphids. The little creature that is hatched is very hungry and immediately begins to look for food.

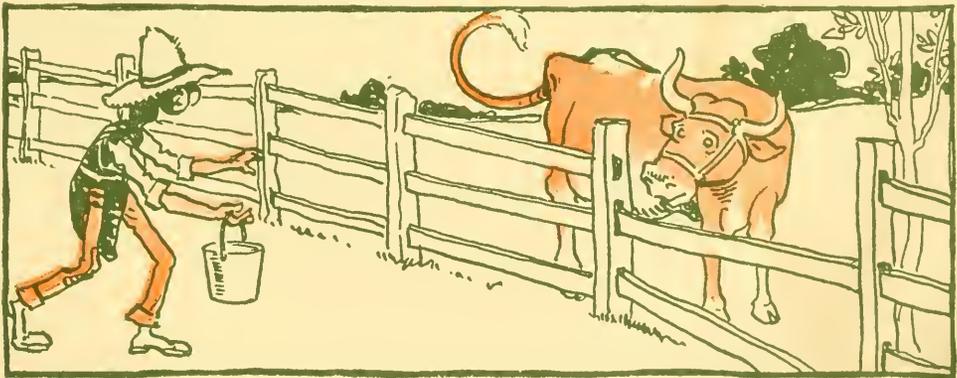
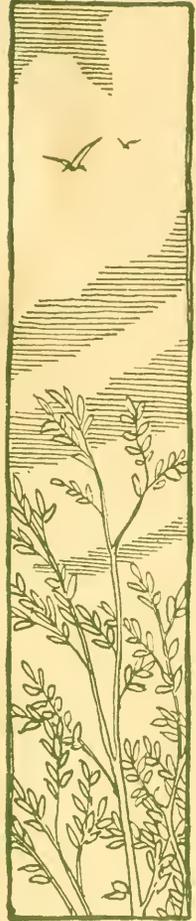
It seizes the first aphid it can find in its strong pincers, and lifting it high in the air, drinks the honey juice in its body with great enjoyment.

“Greater than Mary Frances shows when drinking chocolate soda?” queried Eleanor.

“That’s a question,” laughed Billy. “I’ve never seen many aphis-lions eat, but I have seen Mary Frances drink chocolate sodas ‘galore.’”

“But, Billy,” reminded Mary Frances, after they had finished laughing, “you haven’t told us what other enemies the aphids have, nor what you mean by using a spray.”

“Oh, if you stop to think, you’ll realize that spiders and several different kinds of birds will eat them. They are such stupid little creatures that it’s not difficult to find or catch them.”



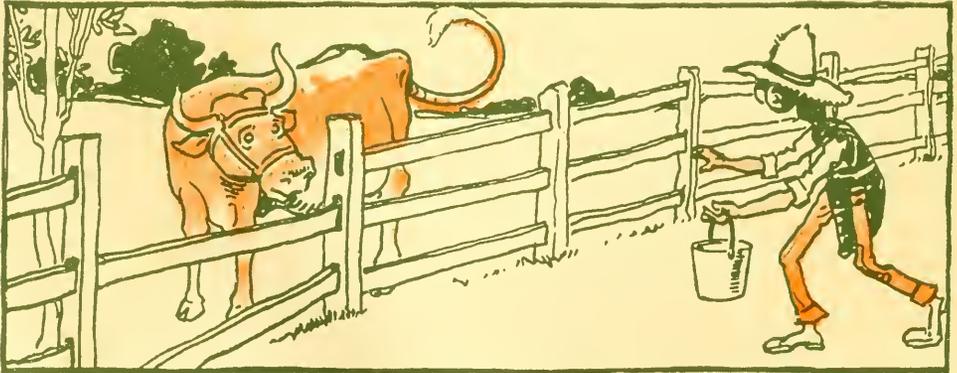
"But what about spraying—is that difficult?" asked Eleanor. "You see, I want to surprise Bob with my superior knowledge."

"Oh, Billy, do give us just as many lessons as you can possibly squeeze into the time Eleanor visits us, won't you?" cried Mary Frances. "Do tell us about spraying or any other thing we ought to learn about gardening."

"Why, Mary Frances, you talk as though I knew a lot on the subject!" said Billy, "when, as a matter of fact, I don't begin to know anything. It seems to me that the more I study, the more there is to learn."

"I'm willing," he went on, "to tell you girls what I can remember of what Professor Weed told about insect pests and insecticides—but I do wish you were both boys!"

"We don't, though. Do we, Eleanor?" said Mary Frances. "I shouldn't think you'd mind. You're always with boys during the school term, and—I don't believe they'd listen anything like as well as Eleanor and I will."



CHAPTER XXIX

SOME SPRAYS FOR GARDEN PESTS

“**R**EALLY, there is some truth in that,” said Billy. “I’m not certain that I can remember much about the subject; but, since you are so anxious to learn, my children, I’ll refer to my trusty note book, and read to you about—

GARDEN PESTS

If we examine the various insects which injure plants, we find they do the harm in two different ways, according to their method of feeding. The different methods of feeding are by—

- (a) biting; or,
- (b) sucking.

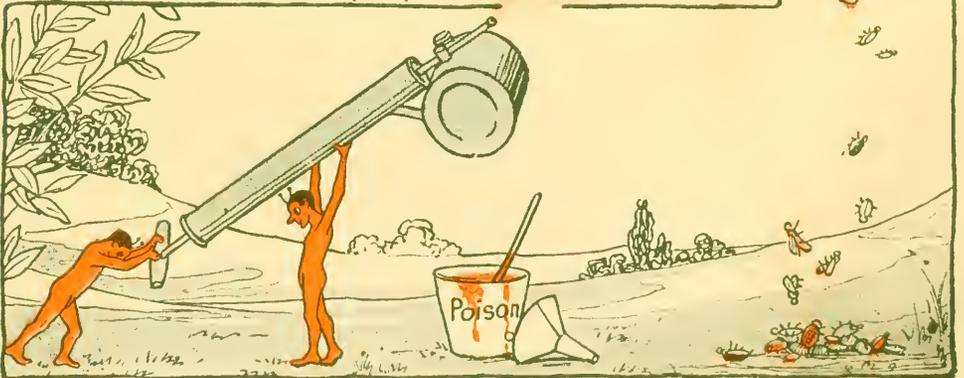
Biting insects have *mandibles*, or jaws.

The biting insects most familiar to you are beetles, grasshoppers, and many “worms,” or larva.

If you catch a grasshopper, and hold a blade of grass in an upright position close to its mouth, you will observe that the jaws do not move up and down, but sidewise. This is true of all insects.

It is quite easy to see the holes in leaves, bark, flowers or fruit where biting insects have been feasting.

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Sucking insects, instead of jaws, have a *haustellum* or proboscis, which is a sucking tube, or beak, somewhat like a sharp hollow bristle.

This they use to thrust down through outer layers of bark or leaves into the inner tissues where they draw up the sap or lifeblood of the plant.

Among the sucking insects are aphids and scale insects.

Now, it is an easy matter to throw poison on the parts of the plants that biting insects devour, where they will eat and swallow it, and then die; but it is almost impossible to place poison in the inner portions of the plants where sucking insects feed.

Fortunately, most sucking insects have soft bodies which are easily destroyed; but it is a rather difficult task to do this work of destruction of sucking insects, because every insect must be touched by the destroying material to smother it, or destroy its breathing pores. Every farmer is familiar with some insecticides, or insect poisons.

The trouble with using poisons, however, is that most poisons which will kill insects will also kill people, so it is better for young gardeners to use remedies harmless to human beings, but deadly to insects, of which there are a few.*

* The small amount of arsenical poisons used by market gardeners and farmers is not dangerous unless the plant is used immediately after their application. The danger lies in having such poisons within reach of children.



Insecticides or insect poisons are applied to plants in two ways: by—

- (a) dusting with powder; or,
- (b) spraying with a liquid.

A "sulphur gun" is a great help in applying powder; although an old can with holes in the top may be used as a sprinkler.

Liquid sprays may be applied with a patent "sprayer," which may be purchased from any seed house; or with a whisk broom.

It is absolutely essential to reach the *under* sides of the leaves in applying insect destroyers.

Among the best insecticides which are non-poisonous to human beings is Hellebore.

Following is a list of remedies for insects oftenest found in gardens.

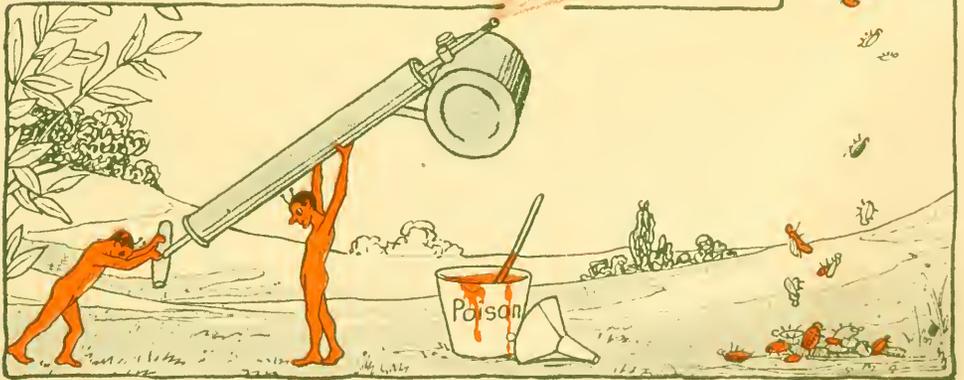
HELLEBORE

For spraying: use two tablespoons Hellebore to a gallon (four quarts) of water.

For dusting: mix two tablespoons Hellebore with fifteen tablespoons flour. Keep in a closely covered can. After a day or two this flour may be sprinkled on the upper and under sides of the leaves. This is best done while the dew is upon them. The use of the flour is simply for the sake of economy.

Wood ashes and also insect powder discourage cabbage worms.

Remedies
for
Biting
Insects



Various Remedies for Sucking Insects

For dusting: insect powder, snuff, sulphur, tobacco dust. Tobacco stems (laid on the ground) will discourage them.

For spraying: Dissolve 1 lb. caustic Whale Oil Soap in $\frac{1}{2}$ gallon (2 quarts) hot water. Mix one cup of this mixture with five cups of water for plant lice, etc.

Hot Water for Aphids or Plant Lice. Hold the branch under water at a temperature of about 125°, or as hot as possible to hold the hand under.

Fungi of various kinds attack plants. Mildew is a form of fungi.

For Fungi—Mildew

Dust the plant well with Flowers of Sulphur.

Bordeaux Arsenate of Lead is used as a spray in early Spring, to prevent fungi, but it is deadly poison and should not be used by children.

For Insects that Feed Under Ground

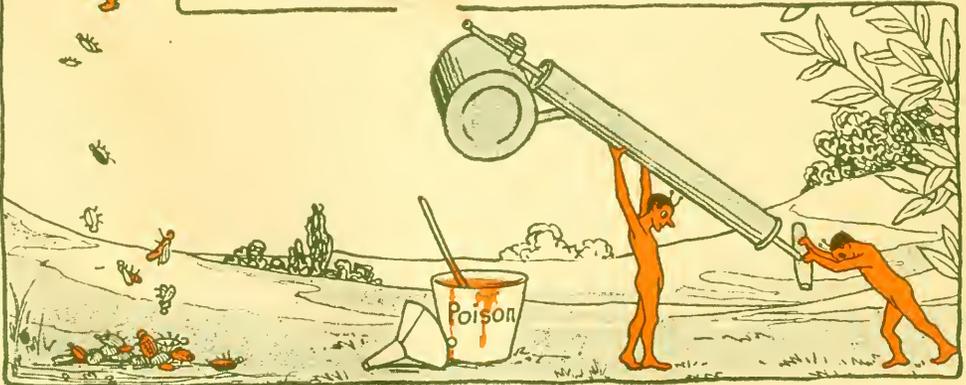
Severe poisons are generally used, the fumes of which kill the insects. Tobacco tea, made by boiling a pound of tobacco stems in a gallon of water, or Ivory soapsuds, if thrown on the ground, will discourage these insects.

For Cutworms, and Insects Feeding on the Surface of the Ground

Poison Baits are used: that is, bran or grass is sprinkled with sweetened poison. (NOTE: It is better for children to use the precaution of paper collars as already explained to Mary Frances in the talk on the Cutworm.)

There are also many excellent remedies sold by seed firms under commercial or "patent" names.

"Well, Billy," cried Eleanor, "if I remember one-tenth of the lesson, I'll be satisfied!"



"And I, too!" echoed Mary Frances.

"If I'd thought," continued Eleanor, "you were such a wisecracker, Mr. Professor Billy, I'd have brought a note book."

"Oh, you girls can see my notes any time," said Billy, pleased with their compliments.

"What I didn't like, Billy, was the constant reference to 'children,'" Mary Frances went on.

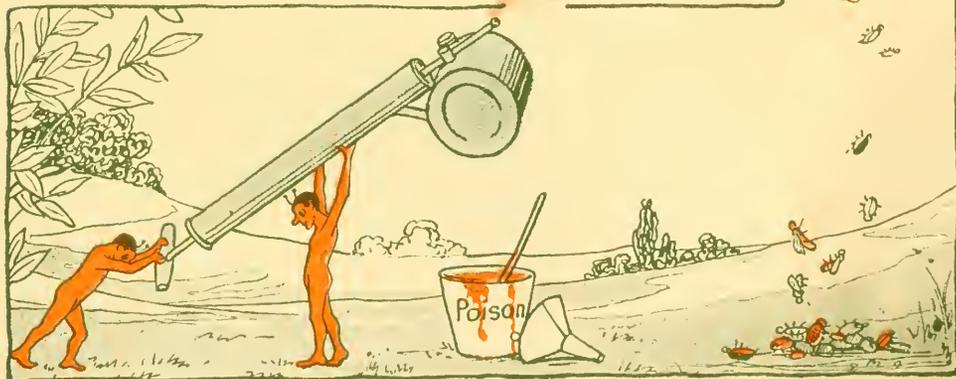
"Now, little girls," began Billy, "that is just for 'Safety First.' When you are a little older and more experienced in gardening——"

"Oh, Billy, if you tease, you'll spoil everything!" declared Mary Frances. "Do keep your old poison secrets. I don't like the idea of killing bugs even."

"Nor the fellow 'who needlessly puts his foot upon a worm,'" quoted Billy. "I bet Bob would rather like that lesson, even if you and Eleanor didn't."

"I'm going to write down what I can remember for Bob," declared Eleanor. "May I use your desk, Mary Frances?"

"Nothing could please me better," answered her friend, leading the way through the play house door.



CHAPTER XXX

EARLY VEGETABLES

“YOU will tell me, won't you, Mary Frances, how you started the garden, and how in the world you induced your brother to give you lessons?”

Eleanor looked up from the notes she had made.

“If it hadn't been for Feather Flop,” began Mary Frances.

“Feather Flop!” exclaimed Eleanor. “Do you mean your pet rooster?”

“Yes,” declared Mary Frances, “he really had a great deal to do with it, although Billy ridicules the idea.”

“I can't quite understand it myself,” Eleanor said. “I thought chickens were very injurious to a garden.”

“Not Feather Flop! He has been so interested from the very first that I myself have been amazed. Eleanor, you should hear about the cutworms and other insects he has eaten, and the weeds he has taken out of the garden.”

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Mary Frances grew excited in being able to praise the rooster to someone.

"He made little piles of weeds at the end of each vegetable patch, and I had to pretend to Billy that I did the weeding, for he'd never, never have believed that Feather Flop did the work."

"Isn't it wonderful!" exclaimed Eleanor. "Do tell me more about him!"

"Hush!" exclaimed Mary Frances, "here comes Billy."

"Hello, girls, want to see something fine?" Billy looked in the play house window.

"Of course!" cried the girls at once.

"Come on out then—follow me."

Billy led them to the vegetable garden.

"What is it?" asked Mary Frances.

"Just brush a little of the earth away from that radish," replied Billy, pointing to one of the largest plants.

"Oh, look!" cried Mary Frances, as she pulled the little red ball root, and held it up for admiration.

"Oh, Eleanor, it is ready to eat! The very first thing from my garden. Let's give it to Eleanor, Billy!"



"Indeed, no!" declared Eleanor. "I think, Mary Frances, you should have the very first of the crop!"

"I know what!" exclaimed Mary Frances. "I'll cut it up into three pieces!"

"Augh, count me out!" exclaimed Billy. "I don't want any! Besides, I guess there are several others nearly that size."

"But no other first ones!" declared Mary Frances. "My, if the garden weren't to be a surprise, I'd want to divide this with Mother and Father, too."

"So would I!" exclaimed Eleanor.

"Well, if girls aren't silly!" Billy looked almost disgusted. "If you want the radish, eat it up. The garden can't be a secret much longer anyhow, for in a day or two you can pull a couple of bunches of radishes and several small heads of lettuce."

"Oh, it seems too good to be true!" exclaimed Mary Frances, dancing around in joy at the thought.

"But," said Eleanor, "surely your parents know you are gardening. Anybody with eyes could see that."

"Yes," exclaimed Mary Frances, "they know we are doing some work near the play house, but I asked



them not to try to find out anything about what we were doing, and they haven't come near! They want to be surprised! I know they do!"

"But how did you get the money to buy the seeds and plants?" asked Eleanor.

"Mother gave me permission to use some money from my bank, and Billy loaned me some from the money he won as a prize in school. I have to pay that back."

"When we sell some of the vegetables," said Billy.

"You don't wonder that I'm excited, do you, Eleanor?" cried Mary Frances.

"Indeed I don't," said Eleanor. "I wish Bob and I had just such a garden."

"You can have," said Billy; "I hope Bob will be able to make me a visit as soon as he has finished being 'coached' in his Latin!"

"That won't be for some time," replied Eleanor. "Meanwhile, I'll try to learn all I can about gardening, and we'll be ready to start in earnest next Spring."

"Oh, won't that be lovely!" cried Mary Frances. "I'm so glad you're here to see our experiment. How



soon did you say, Billy, we could take the radishes and lettuce to Mother?"

"About day after to-morrow," answered Billy, examining the vegetables closely again. "And a picking of peas in about ten days."

"Oh, goody! I love the vegetable garden almost as well as the flower garden," cried Mary Frances, "although the flowers are so interesting and are growing beautifully. Come, let us go look to see if any are ready to bloom," leading the way to the front garden.

"Excuse me," said Billy; "I'm going fishing."

"Good luck!" cried both the girls. "Wish you'd take us!"

But Billy pretended he didn't hear.



CHAPTER XXXI

FEATHER FLOP'S TEMPTATION

“QUEER,” said Feather Flop, as he stopped crowing for a moment early the next morning, “queer, that I can never get to see my little Miss alone any more. How I do hate to see company come, for then I can’t get a word with her! Never mind, I’ll go over to the vegetable garden in a few minutes to see how everything is getting along. I’ll crow very loud now; she might possibly hear and come out.”

He flapped his wings and swelled out his breast, and began to crow loud and long.

He looked at the windows of Mary Frances’ room.

“No sign of her yet. Well, I’ll go over to the garden now, and I’ll work hard to help her.”

He walked over to the play house garden, occasionally stopping to give an answer to a neighboring hen or rooster.

“You’re earlier than usual this morning,” crowed the rooster in the next neighbor’s yard.



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“Cock-a-doodle-doo,” answered Feather Flop. “It doesn’t take much to beat you! Good-morning, though!” and walked on.

When he arrived at the vegetable garden, he fell right to work pulling weeds from between the rows of onions and peas.

When he came to the lettuce, he stopped his work.

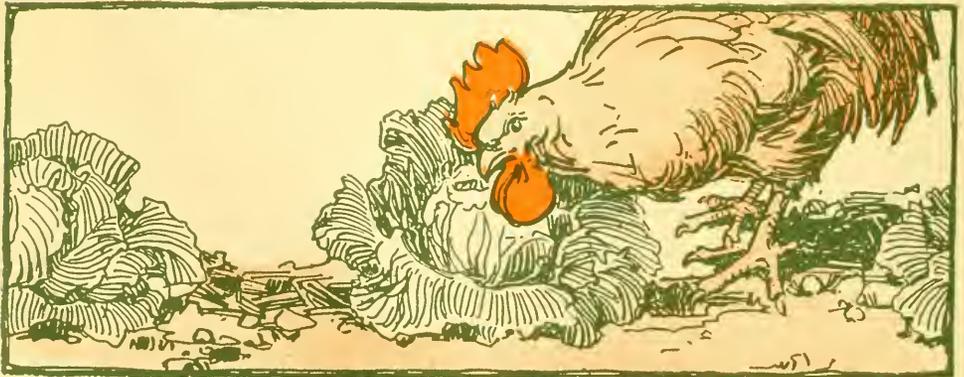
“My,” he said. “My, doesn’t that look good! Oh, how sweet and tender that looks! I don’t believe anybody would miss a leaf or two of the little leaves inside those largest heads.”

He picked at the inside of the largest and most beautiful head in the garden.

“Good!” he ejaculated. “Good! I should think so! I wish I had more!”

“I hope nobody saw me,” he whispered as he looked around. No one was in sight. “Nobody would miss that little peck! I’ll try another head.”

“That’s better than the other,” he said, swallowing the dainty morsel and blinking hard. “I’ll take a little from each of these large heads, and nobody will know anything about it.”



"That's all I'll try now," he decided finally. "I don't wonder human beings like such stuff."

He fell to work again and stopped only when he saw Mary Frances and Eleanor come out of the house and go to the hammock. Then he ran near enough to hear what they were saying.

"To-morrow morning," Mary Frances began, "to-morrow morning I can take in the beautiful lettuce. Oh, Eleanor, such perfect heads. I can scarcely wait one more day."

"If we hadn't promised to go over to Cloverdale, we would work in the garden all day to-day, wouldn't we, Mary Frances?" said Eleanor.

"Eleanor, I believe you love a garden almost as much as I!" declared Mary Frances. "Well, we can't work in the garden to-day; we must get ready for our little journey."

"But, oh—lettuce for to-morrow!" cried Eleanor, throwing her arm around Mary Frances' waist as they skipped up the walk into the house.

Feather Flop watched them from behind the tree where he was hiding. "Maybe I oughtn't to have touched it after all," he said.



CHAPTER XXXII

FEATHER FLOP GETS ANGRY

FEATHER FLOP was in the vegetable garden the next morning long before the children came for the radishes and lettuce.

When he saw them coming, he ran around a corner of the play house, where he could hear every word, but could not be seen.

"Oh, Billy," cried Mary Frances, happily, "isn't this just fine! Eleanor and I will pull the radishes and you can get the lettuce."

Eleanor began to help Mary Frances, and Billy went to the lettuce bed.

"Well, of all things!" He shouted so loud both the girls jumped.

"What in the world's the matter?" Mary Frances dropped the radishes she had in her hand.

"Matter!" roared Billy. "Matter! That old rooster of yours has eaten the hearts of the lettuce! That's all! Darn him!"

"Oh, Billy, don't use such language!" cried Mary

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Frances. "Maybe he didn't do it. Maybe it was a cutworm or a sparrow, or—or—"

"Look here!" demanded Billy. "Who took that bite?" pointing to a hole in the lettuce just the size of Feather Flop's beak.

"Oh, dear!" exclaimed Mary Frances, "I'm afraid it was Feather Flop! Oh, how could he have done such a thing!"

"That's not the only one!" went on Billy, examining further. "Every one of these big heads has just such a bite taken out!"

"What shall we do!" exclaimed Eleanor. "What a disappointment!"

"I'm ready to cry!" said Mary Frances. "I wonder if any of it is fit to use!"

"Yes," answered Billy, "of course, you can use some of the leaves, but the beauty of each head is spoiled! Here, you girls take these things to the house."

"Where are you going?" asked Mary Frances.

"I'm going hunting—hunting for a bird!" replied Billy grimly.

"Oh, don't hurt him!" called the girls.



"Not if I can help it," said Billy.

"What are you going to do with him?" again called Mary Frances.

"Come help me catch him, and you'll see. I'm going to make a prisoner of him!" Billy just then caught sight of Feather Flop as he half ran and half flew across the lawn.

The rooster gave them a long chase, but finally Billy caught him and tucked him under his arm.

Feather Flop meanwhile kept up an incessant chatter.

"We know you're not pleased, old fellow," said Billy as he put him into a coop and held it down, "but you're going to be put into a safe place. No pleading off for you! Now, I've got you fixed."

"Yes, you bad boy!" said Mary Frances.

At twilight, however, a little girl crept out with a plate of lettuce to the old hen-coop where Feather Flop was prisoner.

"Feather Flop," Mary Frances whispered softly, "Feather Flop!" but there was no answer.

She stooped down and looked into the coop. At



first she didn't see the rooster, then she espied him leaning up close to the farthest corner.

"Why, Feather Flop," she exclaimed, "are you ill? Why didn't you answer?"

"I'm not sick," muttered Feather Flop.

"Why, what is the matter then, old fellow?" said Mary Frances.

"Are you going to let me out?" asked the rooster sullenly.

"Not to-night, Feather Flop, I'm afraid. I think, myself, you need a little punishment. Tell me, why did you do it?"

"I'll not answer," said Feather Flop. "I'm mad!"

"Oh, Feather Flop!" exclaimed Mary Frances. "Oh, Feather Flop! You did wrong, and now you're angry! What is the matter with you? You used to be so nice!"

"Oh, let me alone," answered the rooster.

"All right, then," said Mary Frances. "All right! I'm going away now."

"I don't care! You could have saved me from being a jail bird!" said Feather Flop, turning tail.



"Excuse me, I don't care to answer another word!" he declared, putting his head under his wing.

Just then her mother called her, and Mary Frances had to leave him to go into the house.

"Poor old Feather Flop!" murmured the little girl. "Maybe I should have saved him from being locked up like a real thief! I don't believe he meant to be so bad!"



CHAPTER XXXIII

FATHER AND MOTHER'S SURPRISE

“PERHAPS you suspected, Mother dear,” said Mary Frances after showing the radishes and lettuce, and telling about the garden lessons Billy had taught her. “Perhaps you and Father suspected we were gardening.”

“We had an idea that something was being done in that line,” smiled her mother, “but we did just as you requested. We didn’t try to find out.”

“Wasn’t that dear!” exclaimed Eleanor. “I think Mary Frances has such wonderful experiences!”

“She has had a happy life,” said the mother, looking sympathetically at Mary Frances’ little friend, for Eleanor’s mother had died two years before.

Only for a few moments did the tears stand in Eleanor’s eyes, then she said:

“Mary Frances has been so good about sharing her splendid times with me. Do you remember the cooking lessons, and the sewing lessons, and Mrs. Paper Doll’s housekeeping lessons, girlie?”

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"They're not so far past that you can't remember," smiled Mary Frances' mother, "but you girls are growing up fast. I hope that, even when you are young ladies, you will delight in just such lessons as you have already had."

"I feel sure I shall," declared Mary Frances.

"I do, too," said Eleanor.

"Play lessons," went on the mother, "keep fun in your hearts and 'fun keeps one young,' you know."

"Well, these garden lessons were fun," said Mary Frances, "but they had a great deal of hard work attached. Oh, Mother dear, I'll ask you what I meant to! May we serve the lettuce and radishes for dinner, and not say a word to Father about them? Then, perhaps he'll say, 'What fine radishes! What tender lettuce! Where did you get them, Mother?' Oh, wouldn't I just love that to happen!"

"I don't doubt that he will say it, Mary Frances! I would, I know, for I've not seen any so fine this year," replied her mother.

"I have the radishes all washed and ready for the table," said Eleanor. "Shall I put them on?"

Mary Frances nodded.



"Just put them in the refrigerator until nearer the meal hour," said her mother, "then they'll get more crisp!"

"How about this lettuce?" asked Mary Frances, who had it well washed by this time. "Feather Flop didn't hurt it so much after all," she said to herself. "I don't think I'll say anything about what he did."

"Put it in this glass-covered dish and place it on the ice to make it crisp in the same way."

"Here comes Father!" exclaimed Mary Frances, and she and Eleanor ran to meet him.

"Dinner's about ready, Father," said the mother, greeting him and nodding her head to the girls to put their "surprise" on the table.

"Billy will be here in a minute," he replied. "I saw him as I turned in the walk. There he is, now."

"Why," he exclaimed, as he looked at the table, "where did these beautiful little red radishes come from? We haven't seen such beauties this year! And that lettuce! Who's been sending in such a treat?"

Mary Frances was delighted.



"It's our surprise!" she explained. "They are from my own garden, Father!" and she told about the lessons.

At least she tried to tell, but Billy, and Eleanor, too, helped in telling the story.

"Such interesting lessons, Father!" said Mary Frances. "My, I had no idea gardening is so wonderful."

"Fine!" exclaimed her father. "Billy boy, I see it paid to send you to a practical school."

"I wish," said Eleanor, "that Bob was going to study gardening, too."

"Can't you persuade your father to send him away to Billy's school this Fall?"

"Wouldn't that be splendid!" exclaimed Eleanor. "I never thought of it. I'll try my best!"

"But, Father, you and Mother both had an idea of what we were about, hadn't you?" asked Billy.

"We knew 'something was up,' Billy," smiled his father, "but we didn't know radishes and lettuce were."

Everybody laughed.

"Now, that we're all in the secret," Mary Frances declared happily, "I like it better than ever."



"Father can give us a lot of information I don't know a bit about," said Billy.

"I believe Mother knows a lot she's not telling," said Mary Frances.

"Father, won't you give us some lessons on the wild flowers?" asked Billy.

"That would be delightful," his mother said. "We could all share in such lessons. For instance, some day soon we could all take a walk in the woods."

"Won't that be a picnic!" Billy was enthusiastic. "When shall we go? Can't you make a holiday of it, Father? Let us take our lunch."

"If it suits all parties, we'll go day after to-morrow," said his father.

"It just suits me!" declared Billy.

"It just suits me!" echoed Mary Frances.

"It just suits me!" said Eleanor.

"How about you, Mother?" asked the father.

"It will charm me to accept the invitation," smiled the mother.

"Don't you girls oversleep!" warned Billy.

"Oh, Billy, we're not the sleepy-heads!" laughed Mary Frances, shaking her finger at Billy.



CHAPTER XXXIV

FEATHER FLOP MAKES UP

“UNLESS you speak to me, Feather Flop,” said Mary Frances, when she took his breakfast to the coop next morning, “unless you speak to me, I am not coming out again! I’m going to get Billy to bring you your food,” and she turned away.

Feather Flop stuck his head between the slats of the coop, and a tear rolled out of each eye.

“Oh, please don’t go away,” he begged. “I’m so awfully ashamed of myself I don’t know what to say. That’s the reason I didn’t answer.”

“You poor dear old Feather Flop,” cried Mary Frances, opening the slats. “You poor old fellow!”

“I’m so awfully ashamed,” went on the rooster, “that I’d gladly have you chop my head off and make a potpie of me.”

“Oh, Feather Flop, don’t feel quite so bad as that,” exclaimed Mary Frances. “I forgive you, my friend.” For the first time, Feather Flop looked up.

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"Do you?" he asked. "Please tell me again."

"I forgive you, Feather Flop," repeated Mary Frances, gathering him up in her arms. "The lettuce wasn't so badly hurt, after all."

"My, I'm so thankful," said Feather Flop, "though I don't see how you can forgive me. Are you certain that you do?"

"Very certain!" smiled Mary Frances. "As certain as I am that you'll never do such a thing again!"

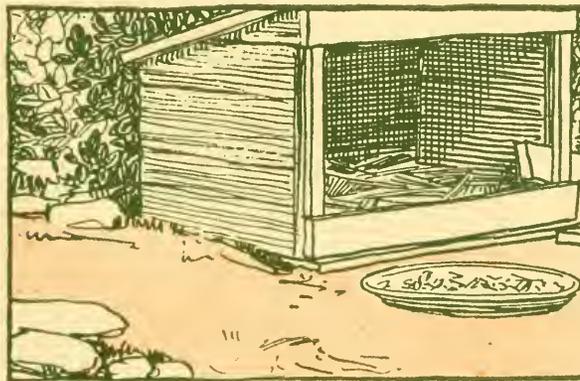
"Never again!" solemnly declared Feather Flop, holding up one claw. "Never again!"

"Well, now, eat your breakfast," said Mary Frances, putting him down and gently stroking his beautiful feathers.

"I — haven't — eaten — a — beakful," said Feather Flop between hungry pecks, "since — I — was — put — in — prison, — so — you — can — imagine — how — awfully — hungry — I — am."

"Indeed I can," laughed Mary Frances, delighted to see him his own self again.

"Does being forgiven always make a person feel hungry?" asked Feather Flop.



"Well, being unforgiven makes a person feel very unhungry," said Mary Frances.

"A strange thing about me, I guess," said Feather Flop, "is, that after I've eaten a full meal, I'm not hungry."

"Of course not," laughed Mary Frances. "Nobody ever is."

"It's very sad, though," declared the rooster.

"Why," began Mary Frances, "I don't see anything sad about that."

"It's sad, because it's so much fun to be hungry and eat. I'd like to eat every minute myself—when I'm forgiven."

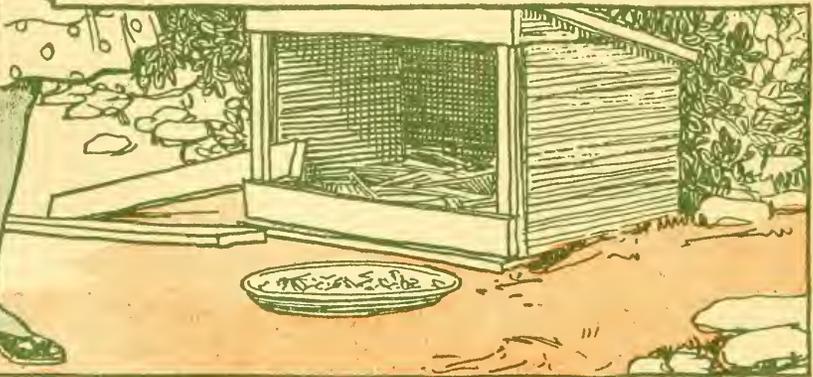
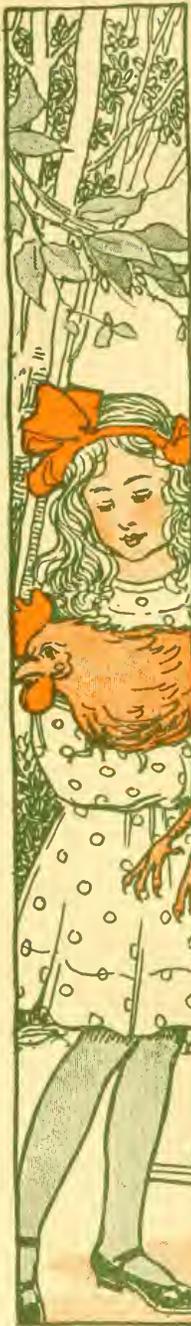
"You do pretty well, Feather Flop," said Mary Frances. "I wouldn't complain. It's far worse to be hungry and not to be able to get food."

"I hadn't thought of that," said Feather Flop.

"What's the next lesson?" he asked abruptly.

"Next lesson?" echoed Mary Frances. "Oh, about roses. Isn't that a nice one?"

"Call on me for anything I can do," said Feather Flop. "I'd starve a year and a half before I'd touch anything good in the garden again."

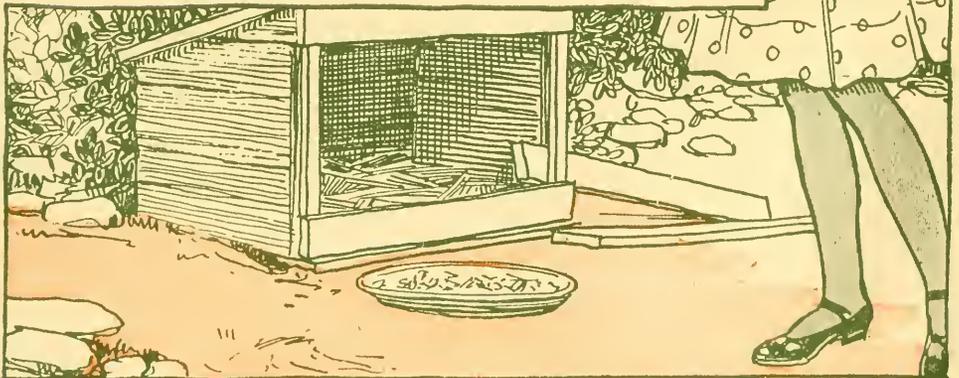


"Oh, thank you, my friend," said Mary Frances. "Thank you! I'll call upon you, never fear. I must go now, though."

"Shake hands?" asked Feather Flop, holding out his claw. "Just to show real forgiveness."

"Certainly," said Mary Frances, taking his claw in her hand and shaking it in a most serious fashion.

As much as she wanted to, she did not smile.



CHAPTER XXXV

ROSES

“VERY many people love roses more than any other flowers,” began Billy, “and Miss Gardener explained to us that for this reason, rose growing has become a specialty among professional floriculturists.”

“Mercy, Billy,” interrupted Mary Frances, “please explain those last two long words.”

“‘Professional floriculturists,’” explained Billy, “are men who raise flowers as a profession or business.”

“Thank you,” said Eleanor.

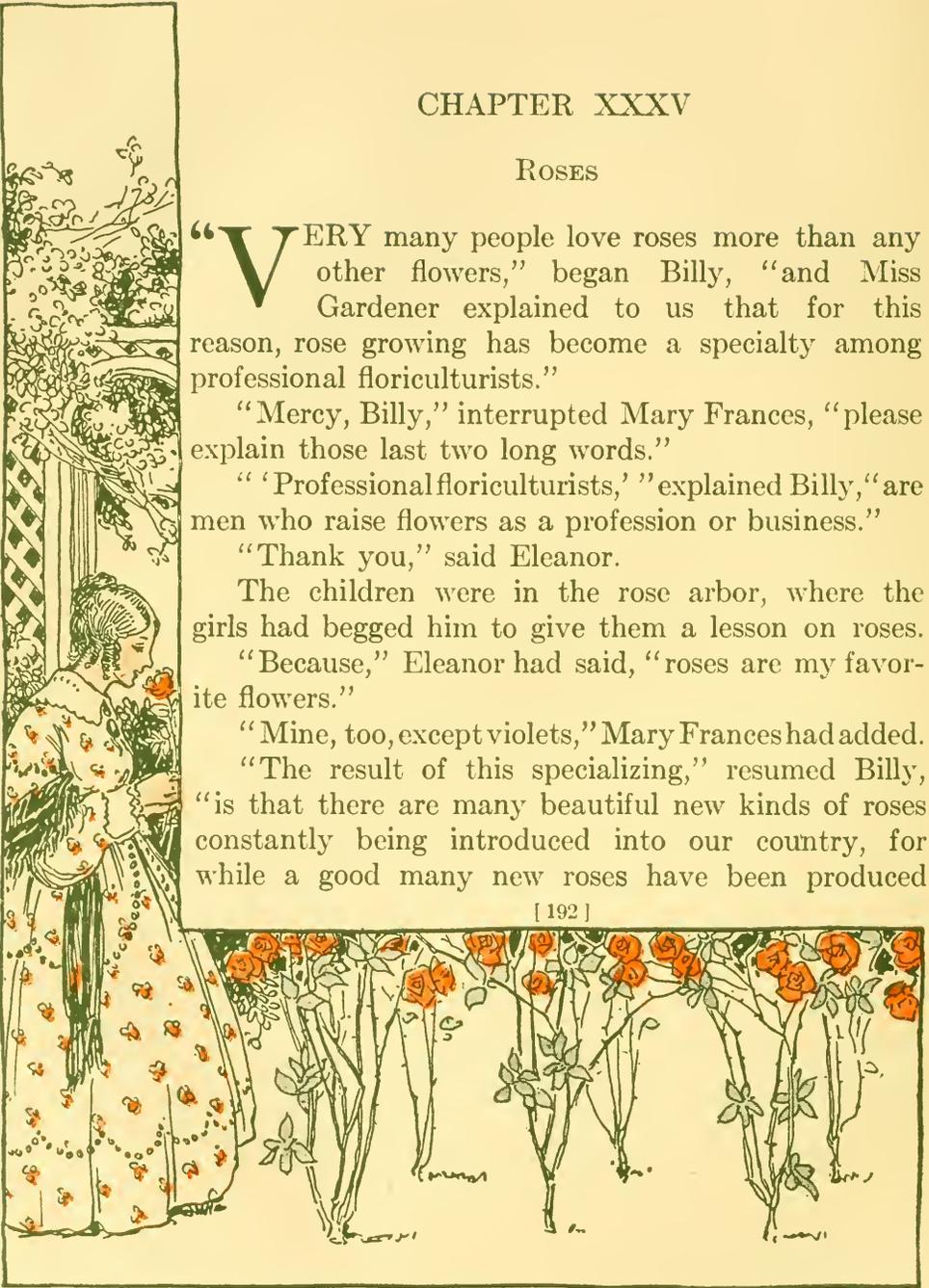
The children were in the rose arbor, where the girls had begged him to give them a lesson on roses.

“Because,” Eleanor had said, “roses are my favorite flowers.”

“Mine, too, except violets,” Mary Frances had added.

“The result of this specializing,” resumed Billy, “is that there are many beautiful new kinds of roses constantly being introduced into our country, for while a good many new roses have been produced

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here, the most have been produced by growers across the ocean, in Ireland and France."

"I never knew that," exclaimed Eleanor. "I thought that roses were—just roses."

"So did I!" declared Mary Frances. Then suddenly, "Oh, here comes mother! Don't stop talking, Billy! Mother will love to hear!"

"Oh, I don't think—" began Billy.

"Please let me listen, Son," interrupted his mother's pleasant voice. "You know how I love roses, I would certainly appreciate hearing what you learned from your teachers about them."

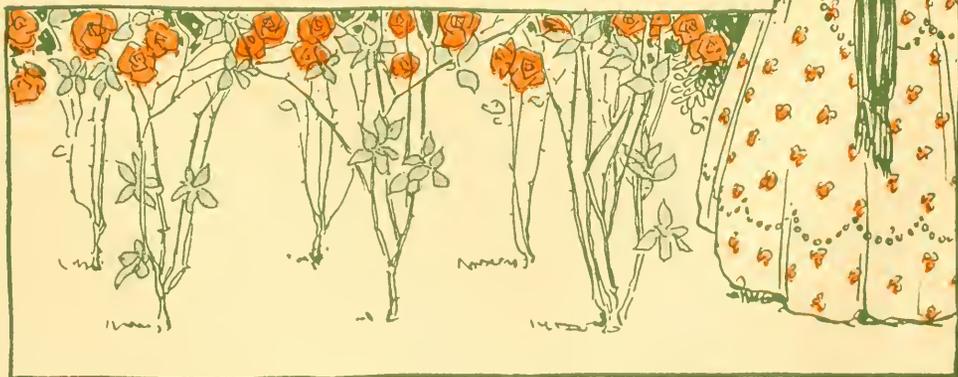
"Well, all right, Mother," said Billy, "but I'll stick more closely to my notes than I generally do, since we are honored by your presence."

The girls made room for her on the arbor seat, and Billy opened his note book.

"Here is the place," he said in a moment. "Here commences the lesson on Roses—

OLD-FASHIONED ROSES

A flower garden would be lacking in interest and beauty, indeed, without the Queen of Flowers, the rose.



No matter how small the garden space, some roses may be grown, and their loveliness and perfume will well repay the work of caring for them.

There were no such beautiful roses in your grandmothers' gardens as you may grow to-day, for more beautiful and more perfect roses come into existence every year.

Perhaps you have heard of "Damask," and "Cabbage," and "China" roses; old-fashioned sounding names they are, very familiar to the ears of your grandparents.

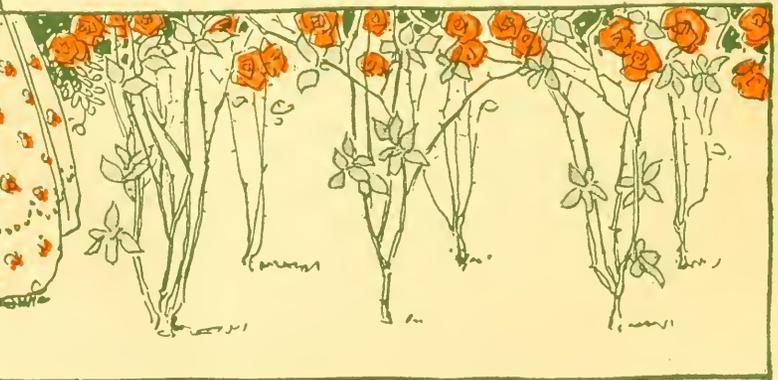
They were the great-great-grandparents of the hardier and lovelier roses of to-day, the "Hybrid Perpetuals," and "Hybrid Teas."

HOW NEW ROSES CAME ABOUT

Some few of the new roses were accidents, so called because good Mrs. Bee carried some strange rose pollen to the pistil of one or more of the old-fashioned roses, and the new rose seed-babies took on a new nature. When the little plants from the new rose seed-baby bloomed, rose lovers were delighted with the more perfect loveliness of the new flower.

They carefully saved the new plant, and tenderly cared for it. When it was old enough and strong enough, they took "cuttings" from its shoots, and grew more plants like it.

Now, rose lovers after noticing what good Mrs. Bee had done by accident, thought, "I wonder if a person could not dust the pollen from a very different rose on the pistil of some particular rose." This was tried, and to-day we have such wonder-



ful improvements on the old-fashioned roses that no other flower gives quite the pleasure to garden lovers as the rose.

HOW ROSES ARE PROPAGATED

No, the seeds of the new varieties would probably not bring plants like themselves. More likely they would resemble closely their parents or grandparents. Besides, it takes a long time to raise a plant from a rose seed.

So the safest and surest way to propagate, or grow more of, the new varieties is by:

- (a) Cuttings, or
- (b) Budding.

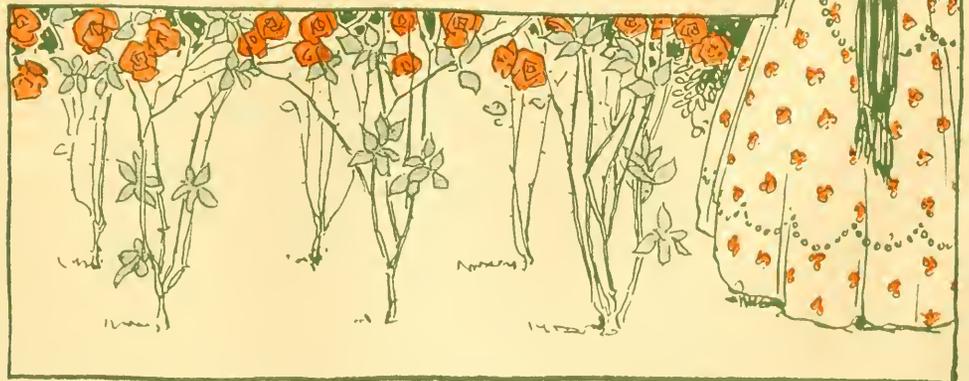
CUTTINGS

Cuttings are "slips" cut from the plant, which if kept in damp sand will take root.

New geranium plants are usually procured in this way. In fact, the old plant is often cut entirely up into sections and each section is planted in an earthen pot. They are kept damp, and soon throw out roots. The new plants of the geranium will bloom much better than the old one, especially in winter, in the house.

Many roses will readily grow out-of-doors from cuttings. Among these are the Rambler roses, the Dorothy Perkins being one of the easiest to raise. Among the Hybrid Tea roses, the La France grows readily from cuttings.

Cuttings, however, do best if raised under glass, in a greenhouse.



Each little cutting may have its own greenhouse. This is arranged by—

GROWING ROSE CUTTINGS UNDER GLASS JARS

At any time in warm weather some cuttings will take root under an inverted jar. The best time to experiment, however, is in the Spring or in August.

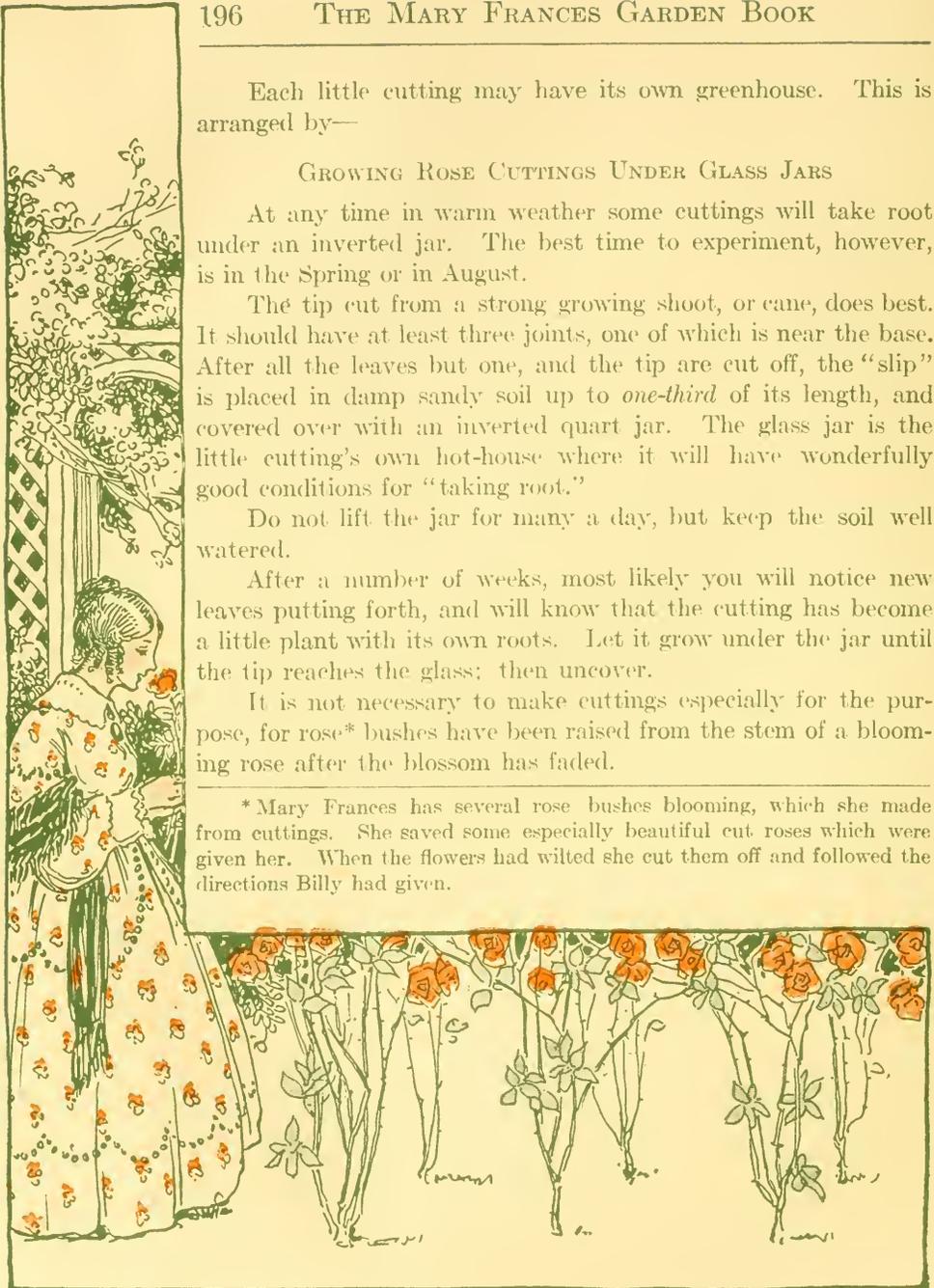
The tip cut from a strong growing shoot, or cane, does best. It should have at least three joints, one of which is near the base. After all the leaves but one, and the tip are cut off, the "slip" is placed in damp sandy soil up to *one-third* of its length, and covered over with an inverted quart jar. The glass jar is the little cutting's own hot-house where it will have wonderfully good conditions for "taking root."

Do not lift the jar for many a day, but keep the soil well watered.

After a number of weeks, most likely you will notice new leaves putting forth, and will know that the cutting has become a little plant with its own roots. Let it grow under the jar until the tip reaches the glass; then uncover.

It is not necessary to make cuttings especially for the purpose, for rose* bushes have been raised from the stem of a blooming rose after the blossom has faded.

* Mary Frances has several rose bushes blooming, which she made from cuttings. She saved some especially beautiful cut roses which were given her. When the flowers had wilted she cut them off and followed the directions Billy had given.



Cuttings are inexpensive, and the method is an easy one for obtaining a large number of plants; but there is a better and quicker and more certain way for professional rose growers.

This is by—

BUDDING

In order to find what is meant by budding, you must understand that the “bud” referred to means the little green “eye” on the stem of the plant where a branch will grow.

This “eye” is cut off with a sharp knife, and slipped under the bark of some wild rose plant, called the “stock.”

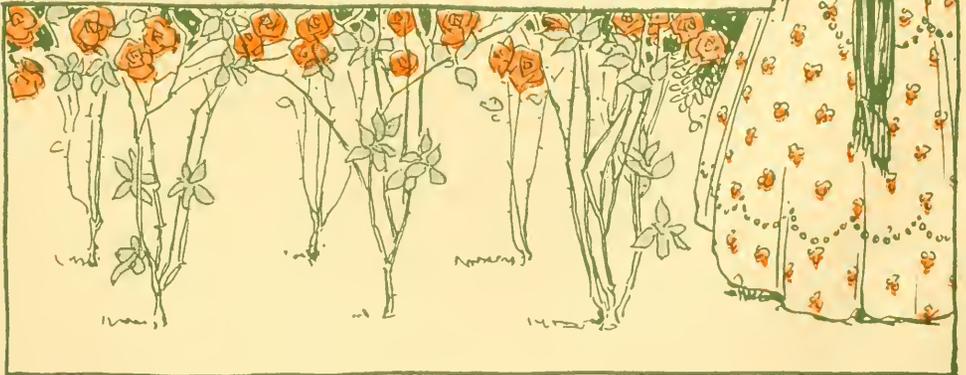
The advantage of budding is that the growth is rapid and commences with the strong roots of the wild plant.

If you buy rose plants from the dealer, they will probably be budded plants. Now, watch for—

“SUCKERS”

You see, in budding, after the “bud” or “eye” has begun to put forth leaves, all the branches of the wild rose plant are cut away, and only the new bud allowed to grow. Sometimes the *wild rose stock* or root will send out a shoot after the new rose bush is planted. If this is allowed to grow, it will use all the food sent up by the roots, and the new budded growth will die out, unless the *wild rose shoot is cut off close*.

“Suckers” are very easily discerned. They are full of prickles, are light green in color, and usually have seven leaves. Cultivated rose bushes with few exceptions have five leaves.

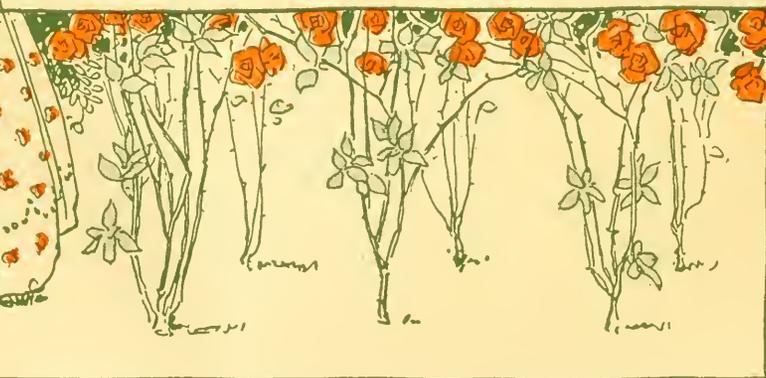


You do not want to find any of your lovely rose bushes killed in this way—so watch out for “suckers!”

Billy looked up from his note book, “I haven’t read exactly as I have taken these notes,” he said; “I’ve made the lesson shorter. Do you wish me to go on?”

“Oh, please do!” cried the girls.

“Yes, Son,” said his mother, “that is, if you are not too tired. I imagine we are coming to that interesting point where we will learn what roses were recommended to you for planting.”



CHAPTER XXXVI

THE BEST ROSES TO PLANT

“YOU are quite right, Mother,” replied Billy, “but before we were given the lists, we learned a little more about the history and—

CLASSES OF ROSES

If we should go back many years, and give the names of the old roses and follow their history until the present time, you could scarcely remember their names.

Already you have heard of “Damask,” “China,” and “Cabbage” roses, and have been told that they were among the grandparents of the roses of to-day.

THE HOMES OF CERTAIN ROSES

Perhaps it would interest you to know that Damask roses were found around Damascus, in Syria, and taken to Europe in about the year 1573; that the “Cabbage”, or “Provence”, rose is supposed to have been known to the Romans, and later was grown extensively in Provence, in the South of France; that the “China” rose was brought to Europe sometime in the eighteenth century from China, where it is a native or “wild”

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rose; that the beautiful, fragrant and delicate Tea rose was brought from China to England about 1815.

ABOUT HYBRID PERPETUAL ROSES

It is not necessary to tell what particular old roses became the great-grandparents of our present roses. Indeed, it would be a difficult matter, for commercial rose growers have guarded well the secret of just what roses they used to produce the new ones.

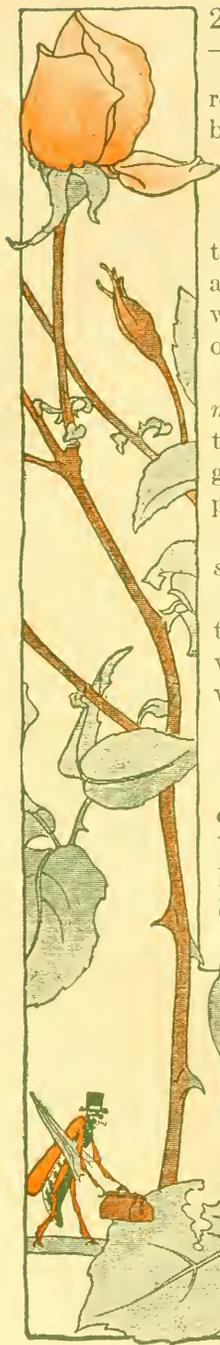
The term given to a new flower is *hybrid*, which means a *mixture*. When, about the year 1825, a new class of roses, called the Hybrid Perpetual, was brought into existence, everybody was glad, because these new hybrids bloomed longer than any of their parents; were of good strong growth; and were perfectly *hardy*.

Perfectly *hardy* means that they would live *out-of-doors* over *severe winter weather*.

Hybrid Perpetual roses are among our most prized roses of to-day for these same reasons; but we now have a still more valuable class of hybrids, with a longer season of bloom, which were derived from—

TEA ROSES

Perhaps the loveliest of all roses are the Tea roses, because of their beauty and enchanting fragrance; but they are delicate. Very few Tea rose bushes can live *out-of-doors* over *cold* weather. Not only are Tea roses most beautiful and fragrant, but they *bloom almost continuously* during the entire season.



ABOUT HYBRID TEA ROSES

So, as I have said, garden lovers who lived where the winters were severely cold and bring snow, could not have the lovely Tea roses in their gardens.

You can imagine their delight when another new class of roses appeared—roses which bloom freely like the Tea roses, and have much of their fragrance, yet are hardy and can live out-of-doors in winter weather, except in the “way north country.”

The name of this wonderful new class of roses is Hybrid Tea; which means, as you already know, that the new roses are the result of a mixture of Tea roses with others.

Hybrid Tea roses are, in fact, a mixture of Tea roses with Hybrid Perpetuals.

WHAT ROSES TO PLANT

For blooms for cut flowers, you will plant many Hybrid Tea roses, and some few Hybrid Perpetuals; for, while Hybrid Perpetuals bloom plentifully only in June, and have a few blooms in the Autumn, they are so large and magnificent that no one wishes to do without the following:

Hybrid Perpetual Roses
(Abbreviation: H. P.)

Hybrid Perpetual Roses bloom profusely in June, and a few times in Summer; quite well in the Fall. They are very hardy. Prune after June blooming to get Autumn blooms.

Paul Neyron:

One of the largest roses in existence; a deep pink in color.

Frau Karl Druschki:

Pure white, large and perfect in form. Buds sometimes 3 inches long. Blooms well.



Hybrid Perpetual
Roses—*Continued*

Mrs. John Laing:

Soft pink, very fragrant and free flowering; one of the best.

Prince Camille de Rohan:

Deep crimson maroon.

There are several other very desirable Hybrid Perpetual roses, but the name of one only of each color has been listed, because one has so much more pleasure in cutting a half dozen buds of the same color and form than a mixture of different kinds.

Even if one has space for many rose bushes, there is a great deal more satisfaction in having two or more bushes of the same variety than many different kinds, for a bouquet of the same kind of flowers is so much more beautiful than an assortment.

Perhaps you thought that the words Hybrid Perpetual meant continuous blooming. Many a grown person has made this mistake in looking over the seedsmen's catalogs. Probably the name Perpetual refers to the fact that the plant lives over from year to year and has such a long life. In England, however, Hybrid Perpetuals bloom for a much longer time than in our country, for the climate is better suited to roses.

Of the many, many beautiful Hybrid Tea roses, you will wish red, white, pink, and yellow; and you will be pleased if you grow some of the following:



Hybrid Tea Roses (Abbreviation: H. T.)

Hybrid Tea Roses are free-blooming, hardy, and combine to a large degree the beauty of color of the H. P. with the fragrance and continuance of bloom of the Tea roses.

Red:

1. General McArthur.
A satisfactory bloomer, crimson scarlet. Good for cutting.
2. Gruss an Teplitz.
Bright crimson. Pretty foliage. Flowers in clusters on a weak stem. A constant bloomer, and very desirable for that reason, and for the color and form of foliage.

White:

1. Kaiserin Augusta Victoria.
Pearly white, tinged with light yellow. A very satisfactory rose.
2. Innocence.
White. A good bloomer.

Pink:

1. Caroline Testout.
Very good for color and hardiness. Fragrant; blooms freely.
2. Killarney.
A general favorite, because of good color and form, and a continuous bloomer. Subject to mildew.
3. La France.
Excellent. Very fragrant. Charming in color.

Other excellent pink roses:

Lady Ashtown.
Killarney Brilliant.

Yellow:

1. Duchess of Wellington.
Deep yellow and orange. Excellent bloomer.





Hybrid Tea Roses—
Continued

Yellow—*Continued*

2. Mrs. Aaron Ward.
Indian yellow; free blooming.
3. Marquise de Sinety.
A magnificent rose of sunset shades, but not so easily cared for, nor so free blooming, as Duchess of Wellington.

In looking over these lists, perhaps you are wondering why you do not find the name of the rose, American Beauty, so dear to American hearts. The American Beauty rose is not hardy, and is grown under glass, and as we are considering only out-of-door roses, it is not listed.

If you happen to live in the warm climate of the South or in California, you can have the luxury of growing the more tender roses, and I am giving you a list of some of the best Tea roses.

Do not attempt to raise them if you live where there is much snow in winter; a few of these might "winter over" if well protected, but with the many exquisite Hybrid Tea roses, it is only a waste of time for young gardeners to experiment.

List of Tea (Scented)
Roses

Tender roses which require extraordinary winter protection in the vicinity of New York.

Do not prune severely.

Red:

There are no dark red tea roses, the nearest perhaps being Souvenir de Catherine Guillet, coppery-carmine, shaded with yellow.

White:

1. Mrs. Herbert Stevens.
Beautiful in form. Sometimes tinged with faint pink shadings.
2. White Mamam Cochet.
White, sometimes tinged with pink.



List of Tea (Scented)
Roses—*Continued*

Pink:

Maman Cochet.

Hardest of all Tea roses; excellent for cutting. Free blooming.

Duchesse de Brabant.

Most fragrant. Silvery pink.

Yellow:

1. Lady Hillingdon.

Reddish yellow; a beautiful rose.

2. Souvenir de Pierre Notting.

Canary-yellow, deeper in center.

Below is a list of Climbing Roses. Climbing roses were brought into existence in a way similar to any of the other new roses.

Hardy Climbing Roses
(For places where the
winters bring snow)

Red:

Excelsa.

A great improvement on the Crimson Rambler, the foliage being nearly free from mildew. Blooms in June.

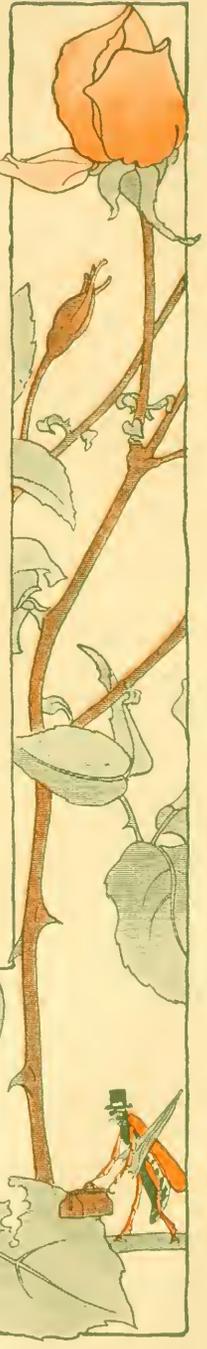
American Beauty Climbing Rose.

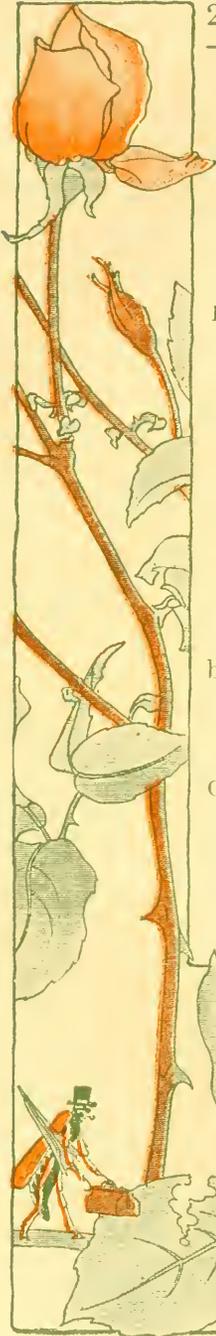
Resembling the American Beauty in shade; blooms are of quite good size, on weak stems, but rather good for cutting. A desirable rose, but not for showy effect.

Pink:

Dorothy Perkins.

A splendid rose; grows very rapidly, sometimes 20 feet in a season. Flowers in clusters. Foliage charming. Blooms in June.





Hardy Climbing Roses
—Continued

Debutante.

Fragrant, very desirable because blooming sometimes in July, in September and October. Tausendschön.

Sometimes called "Rose of a Thousand Blooms." Flowers early in large clusters. Very hardy; beautiful foliage. Color, bluish pink and white.

American Pillar.

Grows very rapidly. A brilliant pink single rose, borne in clusters. Foliage excellent.

White:

White Dorothy.

Flowers at the same time as the Pink Dorothy Perkins.

Yellow:

Shower of Gold.

In warmer parts of the country there is a great variety of beautiful climbing roses, among which may be named:

Climbing Roses for the
South and Pacific
Coast.

Pink:

Climbing Bridesmaid.

Rose pink with crimson shadings, very fragrant.

White:

Climbing Devoniensis. ("Magnolia Rose.")

Large creamy white roses with pink center.

Climbing Roses—*Continued*

Yellow:

Marechal Niel.

This well-known magnificent climbing rose bears masses of double fragrant blooms which are excellent for cutting.

There is another class of roses about which you should know:

WICHURAIANA ROSES (EVERGREEN OR MEMORIAL ROSES)

These roses will live in our coldest climate.

The first were brought from Japan in 1892. The Wichuraiana roses are highly valued where the winters are severe or where the plant cannot receive special care, as in a cemetery. (For this reason they have been called "Memorial.") Once planted, they seem to care for themselves. They trail along the ground, or over rocks, and often climb over any support.

Do not plant them in the rose garden where you need space to grow bushes for blooms which are lovely for cutting.

Wichuraiana roses bloom in June and July and sometimes later. Insects do not trouble the beautiful shiny foliage, which stays green nearly all winter.

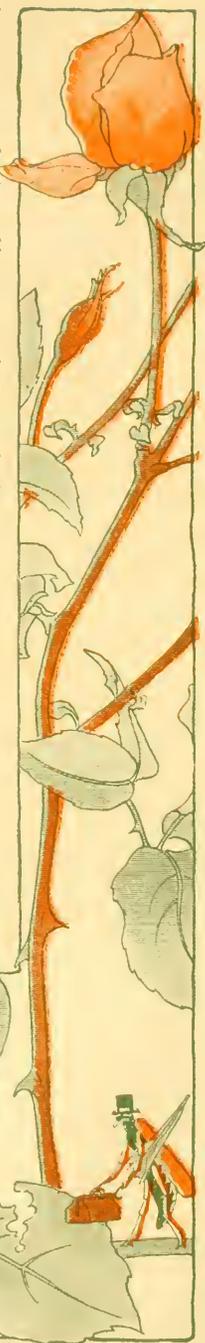
The single roses, if not cut, become red berries in the Autumn. "*Wichuraiana*" is the catalog name of the single variety.

Blooms of the Wichuraiana roses are small compared with the Hybrid Tea or Hybrid Perpetual, but some are beautiful.

The Best Wichuraiana
Rose

Gardenia.

Sometimes called "Hardy Marechal Niel," bears lovely yellow buds which open into double flowers of cream color, resembling a Cape Jessamine.



Suppose you live at the seashore or in the mountains; suppose you have very poor soil for roses; then you will be glad to plant—

RUGOSA ROSES

Sometimes Rugosa Roses have been called, "Ironclad," because of their thick leathery foliage, which is seldom, if ever, troubled with insects; and because of their wonderful hardiness and ability to live under trying conditions.

They bloom early, in large flowers, some of which resemble large single wild roses; others resemble large "double wild roses," if you can imagine such roses. Many make the Autumn gay with their brilliant red seed berries.

Do not make the mistake of planting Rugosa among the rose bushes you are growing for cut flowers.

They are used where heavy growth is needed; as among shrubbery or for a hedge. A single plant looks well on a lawn or at a corner of a house. The Rugosa roses grow from four to six feet tall.

In case you wish one or two of these, the following are—

The Best Rugosa Roses
(Ramanas, Japanese)

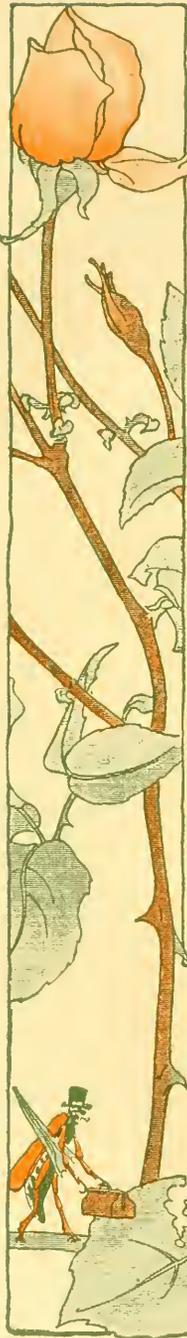
Of very hardy heavy growth, with large single or semi-double flowers, many bearing red seed pods in Autumn.

White:

Blanc Double de Coubert.
Pure double white blooms.

Pink:

Conrad F. Meyer.
Silvery rose; double; one of the best.



"There," said Billy, looking up from his book, "isn't that a long lesson? Well, the reason for it all is this: Miss Gardener and Professor Weed are rose enthusiasts—'rose crazy,' we boys called them."

"Their love of roses was an excellent thing for you boys," said his mother, "for I believe you know more on the subject than most grown-up people."

"Just listen!" exclaimed Mary Frances, "Billy, don't you feel repaid for giving us the lesson? What comes next?"

"Next comes—let me see," replied Billy. "Oh, yes, it's about planting and caring for roses, I remember."

"When will you give us that?" asked Eleanor.

"Does it tell about 'Tree Roses?'" asked Mary Frances eagerly before Billy could answer Eleanor.

"I'll tell you *now*," he said, "about—"

TREE ROSES

Tree Roses are Hybrid Perpetual or Hybrid Tea or other roses, budded or grafted high up on strong stock, or wild growth, and cut or pruned to the form of trees.

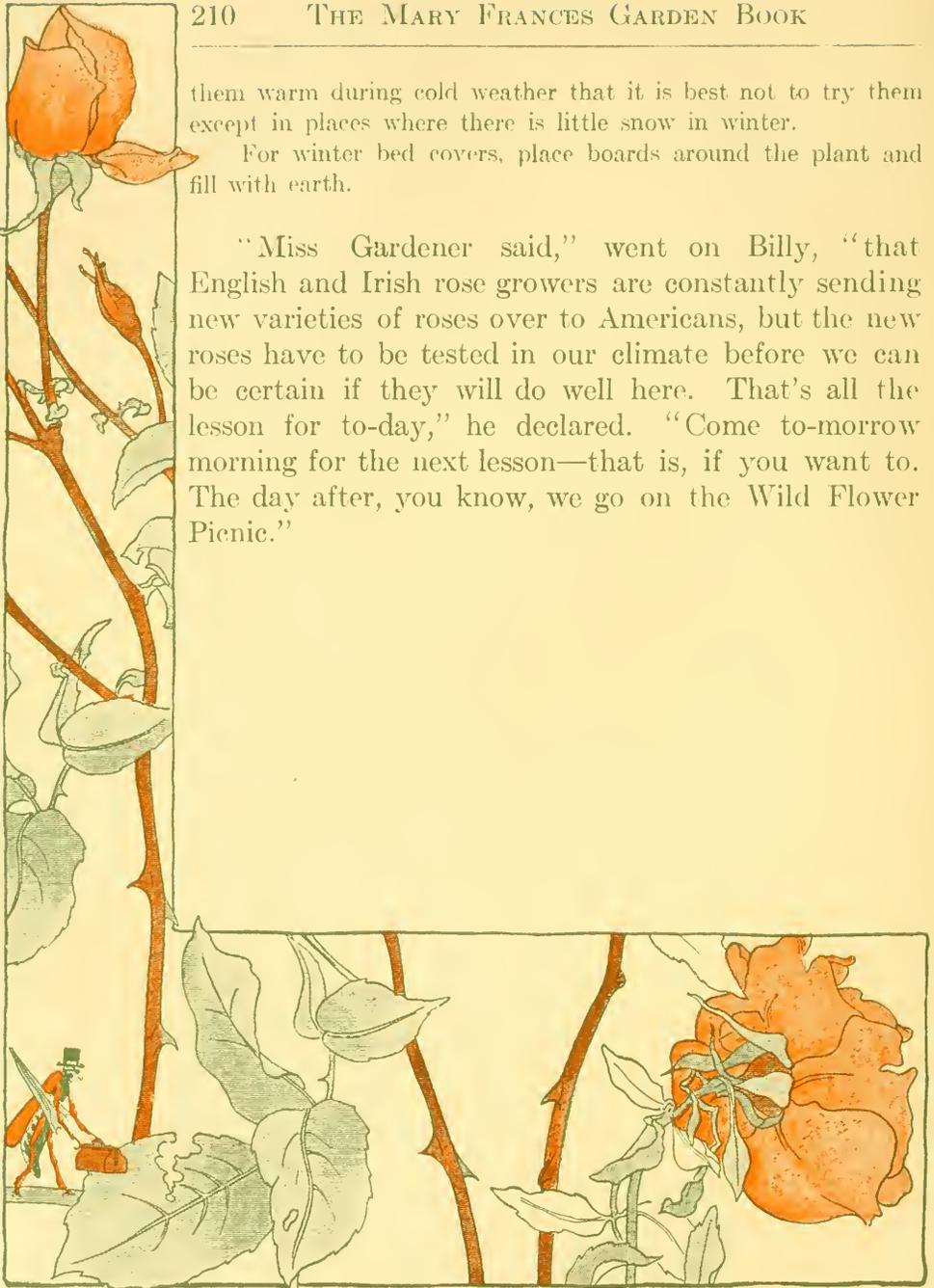
They are very attractive in a formal or "set out" garden, or for edging walks, but such great care must be taken to keep



them warm during cold weather that it is best not to try them except in places where there is little snow in winter.

For winter bed covers, place boards around the plant and fill with earth.

“Miss Gardener said,” went on Billy, “that English and Irish rose growers are constantly sending new varieties of roses over to Americans, but the new roses have to be tested in our climate before we can be certain if they will do well here. That’s all the lesson for to-day,” he declared. “Come to-morrow morning for the next lesson—that is, if you want to. The day after, you know, we go on the Wild Flower Picnic.”



CHAPTER XXXVII

THE WICKED ROSE BUGS

“**Z**EALOUS care brings big reward in rose growing,’ our professor told us.”

Billy was perched in the fork of an apple tree. The two girls and his mother were sitting on the grass which made a thick carpet beneath its branches.

“He used to say it over so often that the fellows nicknamed him ‘Rosy,’” Billy went on.

“Oh!” exclaimed Mary Frances, “wasn’t that awful!” but she and Eleanor giggled, and even her mother smiled.

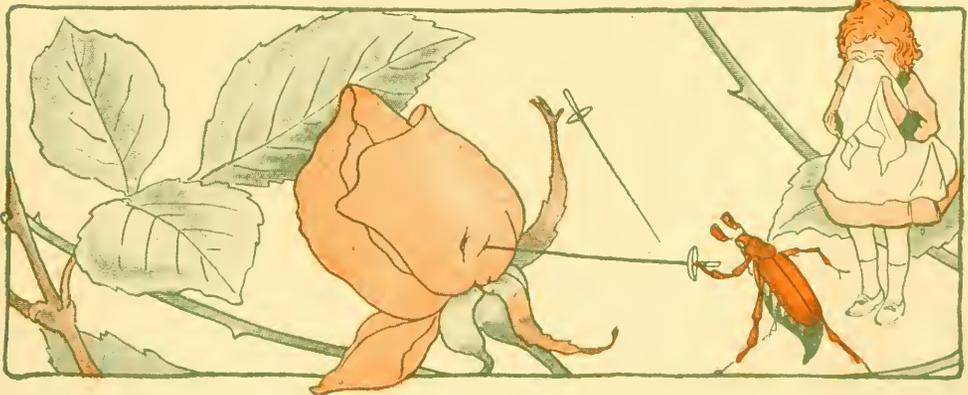
“You didn’t call him that, though?” said Eleanor.

“Not when he could hear me,” laughed Billy. “But if I’m going to give you this lesson we must make a start. The subject, by the way, is—

HOW TO PLANT ROSES

Before you can make a list of the roses you wish to order, you must understand something about the state in which they will be when received, how far apart they may be planted, and—

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WHERE TO MAKE BEDS FOR ROSES

Roses like warmth and air. They love to drink, but they do not like wet feet.

Knowing these things, you will select for your rose bed an airy, sunny place on the south side of a building or wall, if possible, where the ground is not so low that it will hold moisture long.

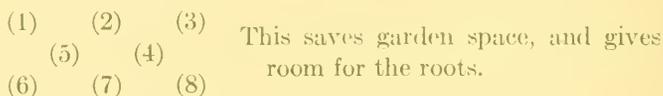
Having decided what is the best place you can offer your roses, you will want to know—

HOW TO MAKE BEDS FOR ROSES

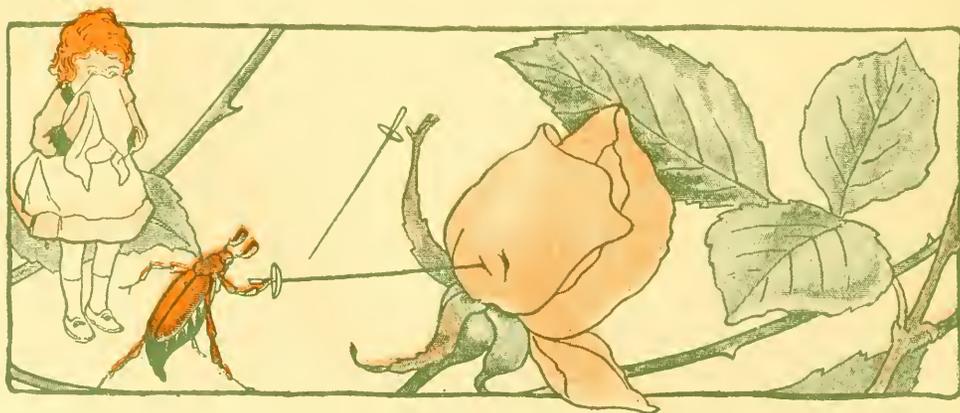
1. Do not buy too many plants for the space. Do not make the bed over five feet wide. If wider, you will tread on the soil and make it heavy.

2. Remember, roses are usually planted twenty-one inches apart. (Do not plant Wichuraiana or Rugosa roses in the bed.)

Alternate the plants, as shown in the following diagram:



3. To be beautiful, roses must have plenty of good food. So *dig deep*; eighteen inches is a good depth. Fill this space with a mixture of soil and well-rotted stable manure. It is best not to let the roots of the roses touch the manure. Sprinkle a



little soil over the manure before putting the plant into its place. If the ground is very damp, dig deeper than two feet and throw in a basket of stones, through which the water will drain.

4. Roses are received from the dealer either growing in pots, or dormant (dry), or with little balls of earth around the roots wrapped in damp moss.

The young inexperienced gardener will do best with the potted plants, but if the plants are dry and dormant (dormant means *sleeping*), it is well to soak the roots before planting. Never expose damp roots to the air. Keep in water or damp earth until planted.

HOW DEEP TO PLANT ROSES

Unless grown in pots, spread out the roots and pack the earth firmly about them, putting the plant deep enough to bring earth three inches over the "bud" or graft.

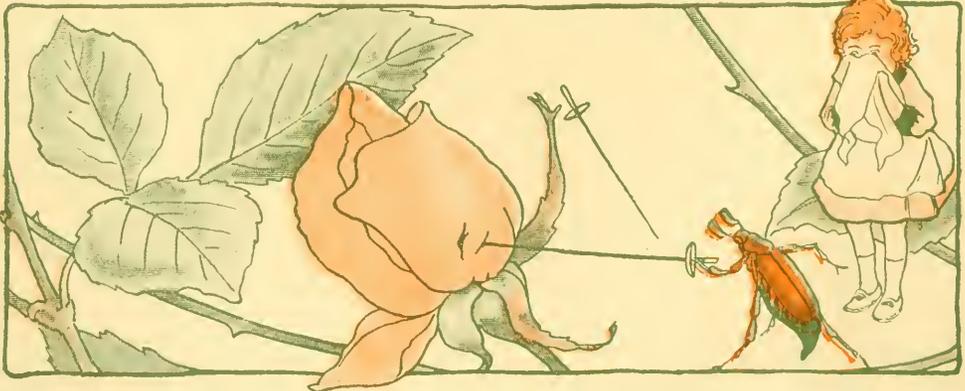
THE BEST TIME TO PLANT ROSES

depends on where you live.

In general, Spring is the best time, but in the South and on the Pacific coast, Autumn is best.

Some of the *hardeniest* sorts will grow well, when set out in the Fall, even in places where the winters are severe.

Now, the bushes are planted, and we will think about—



CARING FOR ROSES

The chief cares for roses are:

1. Cultivating, or stirring the soil.
2. Feeding.
3. Destroying insect enemies.
4. Pruning.

You already understand the importance of cultivating and the importance of feeding the plants.

FERTILIZERS

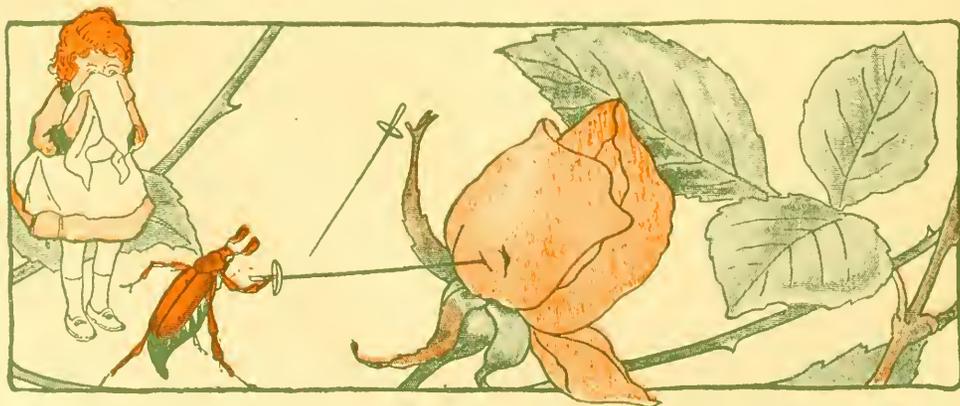
Two of the best foods for roses and easiest to use, are bone dust and dried sheep manure, which you can buy at the seed store. These you may dig into the soil as you cultivate, being sure not to let the fertilizers directly touch the roots.

ENEMIES OF ROSES

1. Rose Bugs.
2. Aphids.
3. Rusts and Mildews.
4. Borers and other chewing insects.

There are several different kinds of beetles, called rose bugs, which come up out of the ground where they have spent the winter, just at the time of the most abundant and beautiful blooming.

In the Middle Atlantic States they stay in a place about two weeks.



The best way to rid a plant of these enemies of roses which "eat them alive," is to hand-pick them, throwing them into a can of kerosene.

There is a patent preparation which is good. Write your dealer for information as to this.

Treat for other insects as you have already learned.

If your parents think you may be trusted to handle a poison, spray in the early Spring with "Bordeaux Arsenate of Lead" to prevent mildew and rust. In summer, use Flowers of Sulphur.

Now, as to—

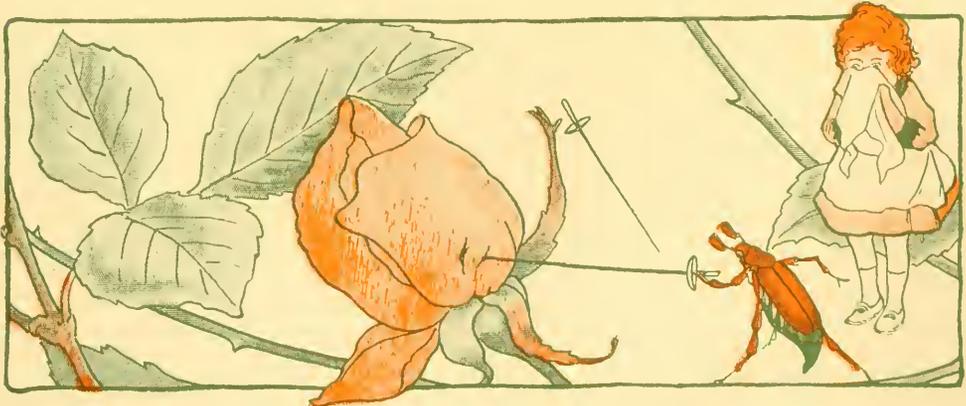
PRUNING ROSES

Prune rose bushes in the early Spring, just when the plants *begin* to show green, which means that their sap is beginning to flow. Use pruning for cutting the stems back.

Remember these principal rules:

1. Hybrid Perpetual Roses should be cut back about two feet from the ground.
2. Cut back Hybrid Tea Roses more sparingly, that is, farther from the ground than Hybrid Perpetuals.
3. Cut back Tea Roses only a short distance.
4. Cut only the dead wood from the other kinds.

Pruning cuts off the ends of the branches and causes the plant to throw out strong joints from the eyes along the canes, which will bear flowers.





"My," exclaimed Mary Frances, as Billy closed his book suddenly and jumped to the ground. "Is that all about roses?"

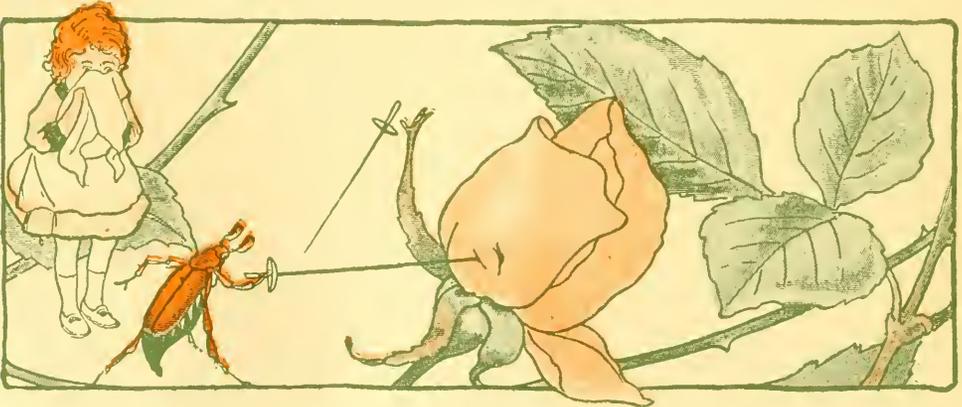
"No, dear," answered her mother. "No, that is just a 'first beginning,' as you used to say when you were little."

"Speaking of insect enemies, I see the wicked rose bugs have eaten into the hearts of the most beautiful roses we own," went on her mother.

"Come," cried Mary Frances, "let's go see if we can find them—and drown them in kerosene."

"Oh, but I'm afraid of them!" shuddered Eleanor.

Mary Frances laughed. "They won't hurt you!" she said, running ahead. "I bet I can catch the first hundred!"



CHAPTER XXXVIII

THE FAIRY WOOD NYMPHS

JUST as the family had planned, they started on the walk in the woods the next morning.

Mary Frances and Eleanor were walking with their mother, while Billy and his father followed with the lunch baskets.

"Be careful where you step!" called Billy suddenly; but it was too late, for with a cry of pain, his mother fell upon the thick undergrowth.

Billy and his father came running.

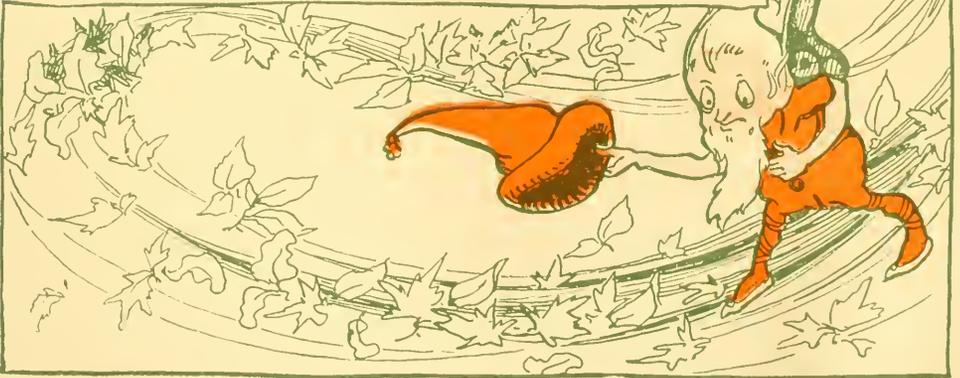
"Oh," cried Mary Frances, "oh, dear! I ought to have told mother. I remember tripping over the vines here. Are you much hurt, Mother dear?"

"Not much," she replied, but as she made an effort to move, she sank back with a little sigh.

"It isn't a bad sprain, dear," said the father, examining her ankle, "but you ought not walk another step."

"Oh, the poor children will be so disappointed!"

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"That's just like mother!" exclaimed Mary Frances. "Never to think of herself first!"

"I know what you and I can do, Father," said Billy. "Let's make a 'sedan chair,' and carry mother home."

"That's a good idea, Son—we'll leave the girls and the lunch; and if the doctor says she may come, I'll drive mother out late in the afternoon after she has rested."

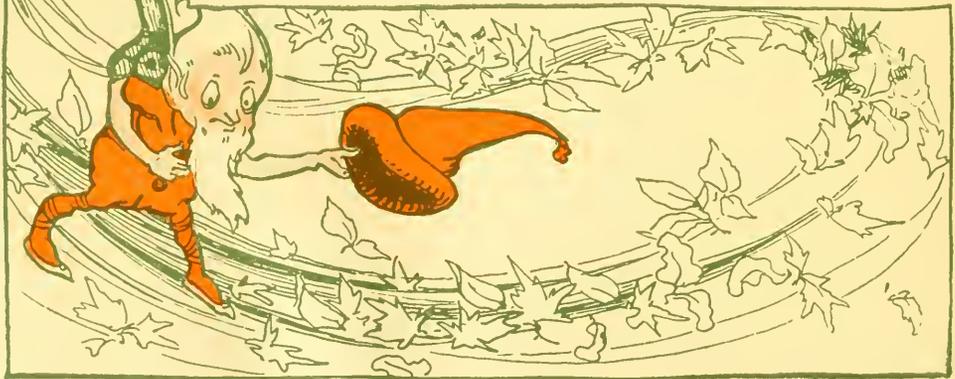
"Oh, no, let us go with you!" cried Eleanor and Mary Frances together.

"It will make me so much happier, girls," said the mother, "if you will stay and try to enjoy yourselves. Billy will be back soon, and maybe you can have a bunch of wild flowers ready to take home when you come this afternoon. I'm not hurt seriously, but I think a hot-water bath and bandage for this ankle will prevent further trouble."

"All right, Mother dear," said Mary Frances, kissing her. "If it will make you happier, we'll stay."

"I'd eat lunch right over there," suggested Billy, pointing out a lovely green spot near a spring.

"Trust Billy to think of pleasant 'eats,'" laughed



Mary Frances, as Eleanor and she picked up the lunch baskets, and Billy and his father started off with the mother comfortably seated on the "sedan chair" which they made with their hands.

"We'll wait for you, Billy," called Eleanor.

"Better not," said Billy, "because I may be late—I may stay to dinner at home."

"We'll wait a while, any how," called Mary Frances. "Good-bye!"

"Good-bye!" called everybody.

* * * * *

The girls felt quite lonely and sad as the other three disappeared from sight.

"Oh, dear," sobbed Mary Frances, "I just pretended to be cheerful because I knew how sorry mother was to disappoint us."

"My, but you were brave," replied Eleanor. "Indeed, I felt just like crying, but when I saw how you were behaving, it made me feel ashamed."

"Well," said Mary Frances, drying her eyes, "let's set the table—Billy will be back sooner or later, and I don't want him to see I've been crying!"

So they spread their lunch cloth and paper plates.



"If we only had some flowers for a centerpiece!" exclaimed Mary Frances.

"Let's go gather some!" suggested Eleanor.

"All right!" Mary Frances sprang up.

"What can we put them in?" asked Eleanor practically.

"Oh, I know!" cried Mary Frances running to one of the lunch baskets. "Let's drink this milk, and use the bottle for a holder."

"Lovely!" said Eleanor. "My, I didn't know I was hungry!"

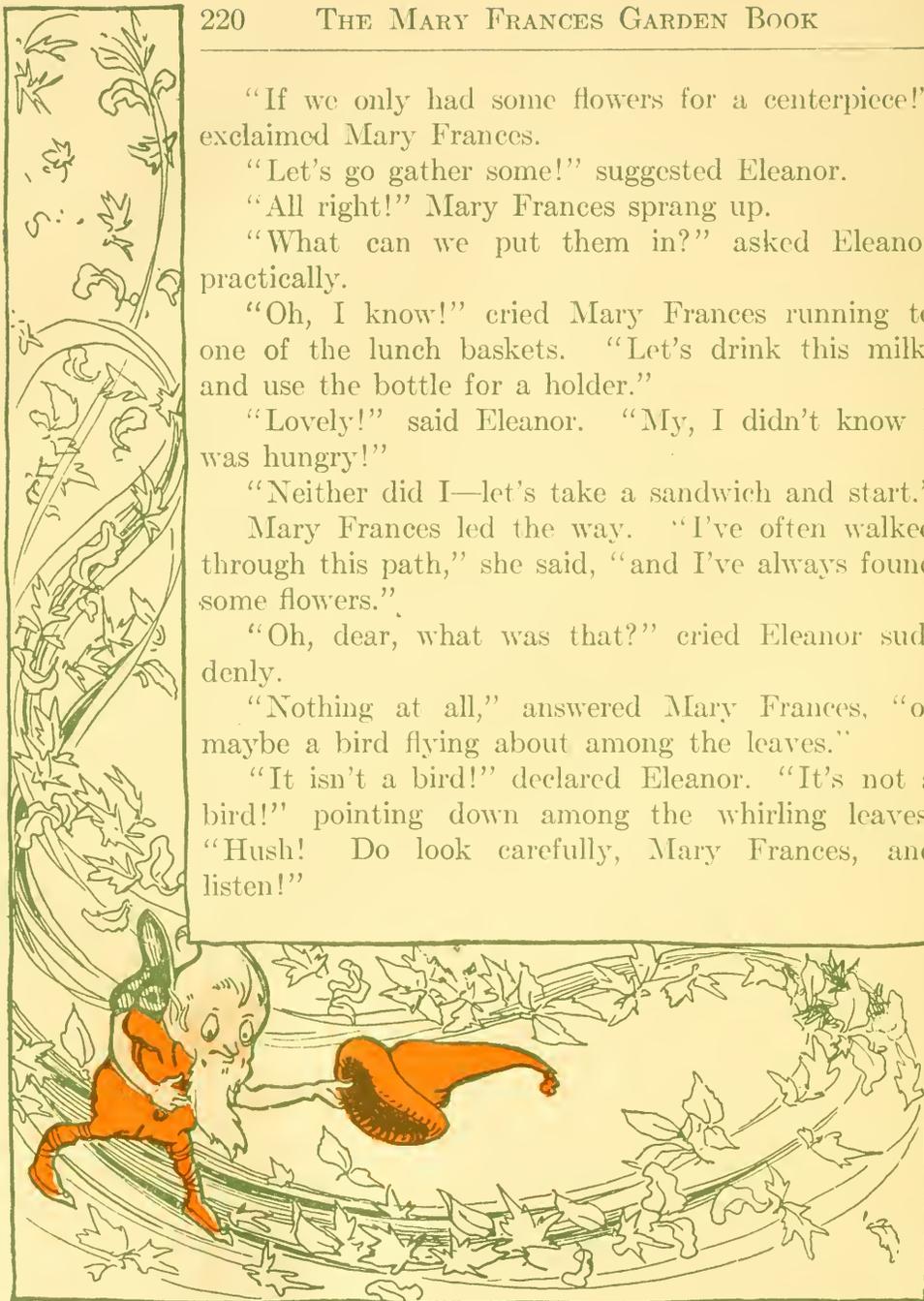
"Neither did I—let's take a sandwich and start."

Mary Frances led the way. "I've often walked through this path," she said, "and I've always found some flowers."

"Oh, dear, what was that?" cried Eleanor suddenly.

"Nothing at all," answered Mary Frances, "or maybe a bird flying about among the leaves."

"It isn't a bird!" declared Eleanor. "It's not a bird!" pointing down among the whirling leaves. "Hush! Do look carefully, Mary Frances, and listen!"



They stood still.

“Wild carrot, toad flax,
Buttercup and daisy,
Do you love them well as I?
If not, you'll be crazy.”

Although the voice was very thin and piping, they heard every word distinctly. “That's not a bird,” whispered Mary Frances.

“Crazy, crazy, crazy, crazy, crazy,” sang the voice.

Still the girls didn't see anything among the leaves where the voice seemed to come from.

“Tinkle Bell,
In a dell,
Dearly loved
A daisy.
Do you love one
Well as she?
If not, you are——”

“What?” asked the little piping voice.
All the leaves stopped whirling.



"What?" again asked the little voice.

"Crazy," replied Mary Frances, laughing softly. "But we're not crazy. We dearly love daisies, and wild carrot, and buttercup and—well, yes, we love toad flax, too."

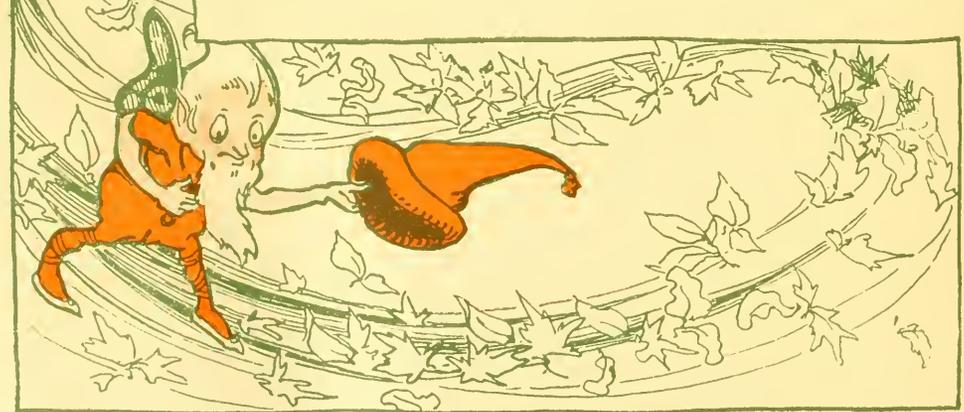
"Oh, I'm so glad, because we can be friends."

At that the leaves began to whirl and dance furiously, and out of the midst of them leaped a little fellow not anything like as large as Mary Marie, Mary Frances' doll.

He was dressed in forest brown from the tip of his pointed cap to the toe of his pointed boot. His coat and tiny knickerbocker breeches were made of green leaves. Even his hair and beard were yellowish-green as though made of very fine grass. For buckles on his shoes he wore tiny dew drops which glistened like diamonds. The buttons on his coat were of the same. At the end of his peaked cap dangled a tiny wild fringed gentian.

"Flower lovers are always friends," said he, bowing. "Young ladies, it gives me much pleasure to introduce myself. I am Jack-in-the-Pulpit!"

Mary Frances wanted to ask him how he hap-



pened to be out of the pulpit, but she suddenly thought he might not like the question, so she said:

"Why, how do you do, Mr. Jack? We are pleased to know you;" and she and Eleanor both smiled.

The little fellow was delighted.

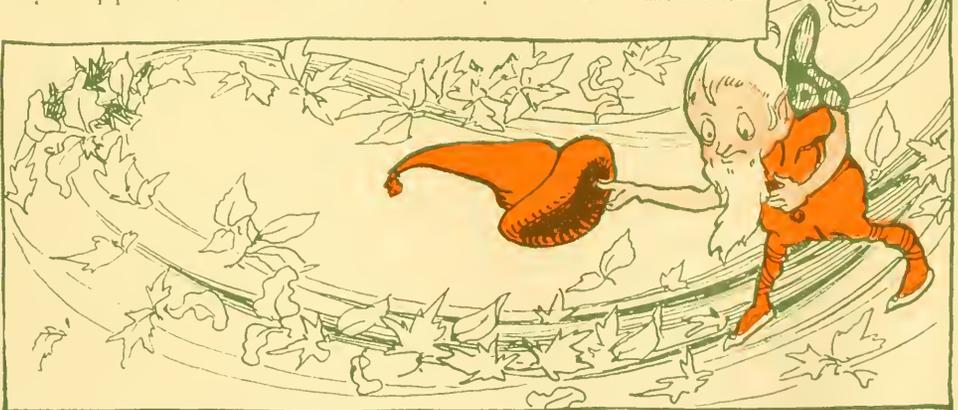
"You really are glad—that I can see. There are lots of human people who come into the woods who never listen or look when we call."

"Why," asked Eleanor looking round, "are there more of you?"

"Oh, my, yes," nodded the little fellow. "Lots and lots more, only the others are very busy getting flowers ready for next Autumn and Spring—that is, all but one. Her name is Bouncing Bet."

At that the leaves began to bounce and to whirl again, and out of their midst sprang a tiny little lady. She was so beautiful that both the girls exclaimed, "Oh, isn't she lovely!"

She certainly was lovely, in a gown of queen's lace over wild rose petals. On her feet were tiny lady slippers; on her head a lovely violet. Her hair



was of yellow-white thistle-down. When she spoke, her voice sounded like a laughing bell.

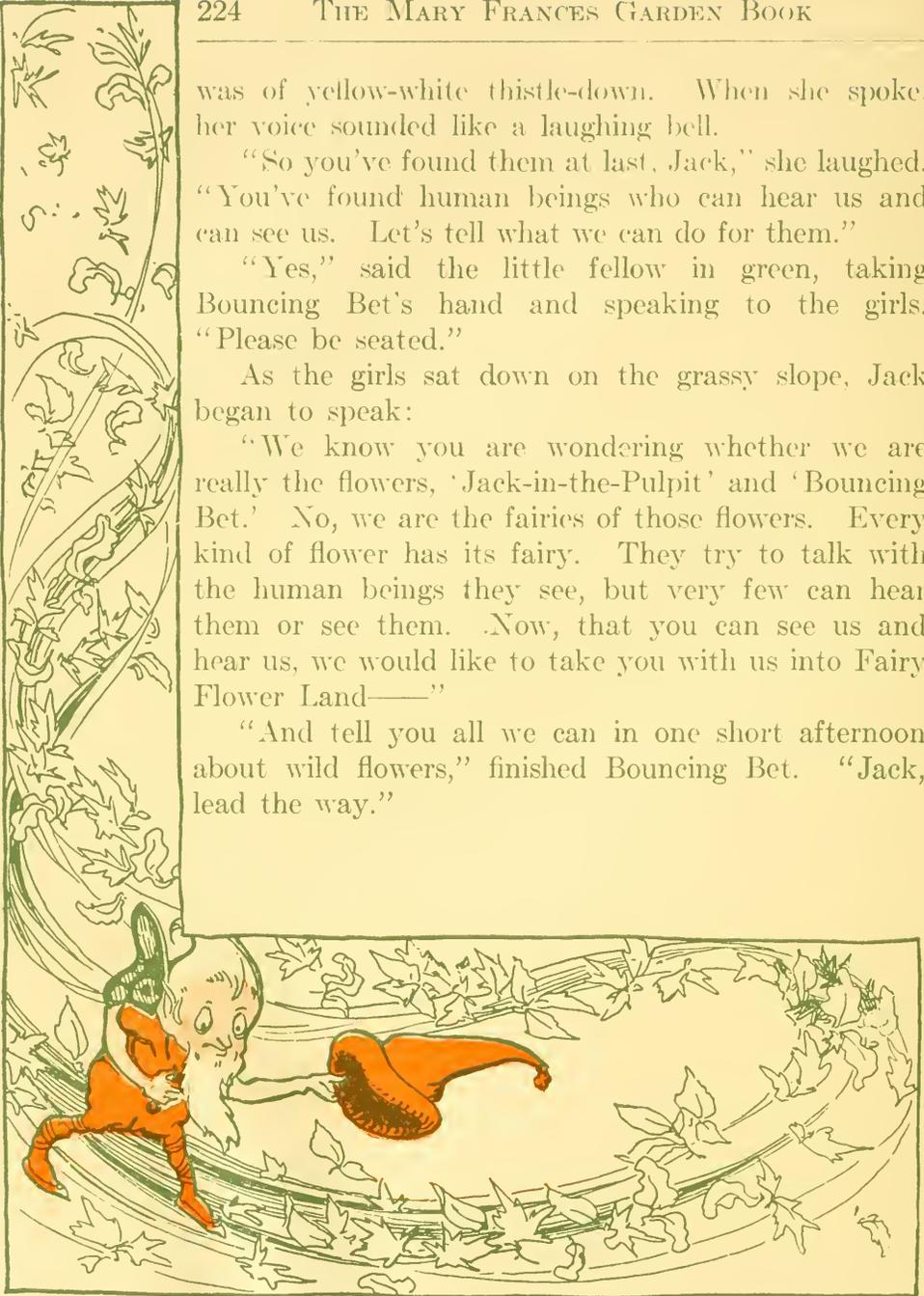
"So you've found them at last, Jack," she laughed. "You've found human beings who can hear us and can see us. Let's tell what we can do for them."

"Yes," said the little fellow in green, taking Bouncing Bet's hand and speaking to the girls. "Please be seated."

As the girls sat down on the grassy slope, Jack began to speak:

"We know you are wondering whether we are really the flowers, 'Jack-in-the-Pulpit' and 'Bouncing Bet.' No, we are the fairies of those flowers. Every kind of flower has its fairy. They try to talk with the human beings they see, but very few can hear them or see them. Now, that you can see us and hear us, we would like to take you with us into Fairy Flower Land——"

"And tell you all we can in one short afternoon about wild flowers," finished Bouncing Bet. "Jack, lead the way."



CHAPTER XXXIX

GOOD AND BAD WEEDS

AT that, the little fellow picked up a tiny stick, which he used as a cane, and started ahead, Bouncing Bet following with a happy hop-skip-and-jump step.

Mary Frances and Eleanor were surprised that they had to hurry to keep up to the tiny little beings.

At length they came to a high hedge.

"Touch me with your hand," said Jack to Mary Frances, holding out his arm.

"Touch me with your hand," said Bet to Eleanor.

"Now, when I say 'three,' all jump," commanded Jack.

"One, two, three!" Over the top of hedge they went as though they had wings, and found themselves in the midst of a wonderful garden.

"Oh," cried Mary Frances, "I never, never saw so many wild flowers blooming at once."

"This is a fairy garden," answered Bouncing Bet,

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"and the fairies keep it for just such friends as you, who are anxious to learn about wild flowers."

"But we can tell you only the shortest flower stories to-day." Jack caught up the conversation. "Just take a seat please, and I'll begin."

The girls sat on a pretty rustic bench under a tree, and Jack and Bet leaped upon a branch in front of them. Then Jack began:

"GOOD AND BAD WEEDS"

"Of course you know that all the flowers cultivated in your gardens have come from wild flowers.

"Through years of care, the wild flowers have improved so that it would be almost impossible to trace each of the plants in your gardens to the wild flowers from which it was started.

"There are many hundreds of wild flowers, but none more beautiful than those growing in America. There are many different kinds which were growing here when America was discovered, but the seeds of many more were carried over from Europe in grain for the colonists.

"Some of the wild things are most helpful to



human beings; such as mint, and dock, and dear old dandelions, and other 'weeds' which may be eaten. From 'weeds' also come some of the most wonderful of *medicines. Perhaps you have tested the medicinal effects of mustard, catnip, and boneset."

"I tried catnip on our Jubey," said Mary Frances. "It did her lots of good."

"I've had mustard plasters, and mustard baths, and boneset tea when I've been ill with chills," Eleanor added.

"Just so! just so!" nodded Jack-in-the-Pulpit; "so you see, many 'weeds' are not useless plants, but are very valuable. The Indians knew that."

"My, I hadn't any idea weeds were valuable," said Eleanor.

"I always knew about mint and catnip," Mary Frances replied, "but I didn't know other weeds were of so much help."

"Of course there are many weeds which seem of no value at all. They steal the food of valuable

* For information concerning weeds used in medicine, send for Farmers' Bulletin No. 188, which may be had free from the United States Department of Agriculture.



plants and choke them out." Jack went on. "For instance, there's corn cockle, the seeds of which are poisonous. It loves to grow among the corn and wheat, and troubles the farmers terribly."

"I think the flowers are quite pretty," Mary Frances ventured to say.

"Oh, you know them when you see them?" asked Jack. "That's good, because we can go on with our story faster if you know some of the wild flowers. You would like to gather some out of our fairy garden, wouldn't you? Well, you may take some of all that are in bloom at this time of year, after we finish telling you what we so much want you to learn about our dear flowers."

"Now, it is Bet's turn," he went on, turning toward the dainty little fairy, who began to bounce happily up and down on the branch of the tree.

The girls were delighted with her dancing. At length she stopped and began to talk in her musical voice.

"I am going to talk a little about the flowers," she said, "and shall mention only the ones known by most people, because we have such a short time



for your lesson. I shall just mention them, and if you do not know them, please interrupt me, and Jack and I will take you through the garden to show them to you. Do you know the—

Daisy (Other names:
Ox-Eyed Daisy,
White Weed)

This charming gold and white, wheel-shaped flower, which is a troublesome weed to the farmer, blooms everywhere afield from May to November, from Canada to the southern States, and to the Mississippi River. It is perhaps the best known wild flower in the Eastern United States.

Great Mullein (Other
names:
Velvet Dock,
Aaron's Rod,
Flannel Leaf)

Almost everywhere this tall rod, bearing yellow flowers, which resemble huge buttercups, may be seen from June to November. Its velvety leaves, which grow in rosettes on the ground, are soft to the touch, but if sheep or cows try to eat them, the down upon them becomes splinters in the tongues of the animals. That is one reason it grows so widely—the down saves the leaves from harm. This same down is sometimes used by humming birds to line their tiny nests, which are no larger than a large thimble, yet hold two humming-bird babies.

The seeds of the great Mullein are eaten by gold-finches, or they would scatter yet more abundantly. The great Mullein is a native of Europe.

“My winter coat is made of velvet dock,” said Bouncing Bet.



"Mine is made of flannel leaf," Jack added.

"Yet they are both made of the leaves of the great mullein," laughed Mary Frances.

"Good," laughed Bouncing Bet. "Jack, we didn't catch her."

"Now comes a wild flower with a charming name," she went on. "It is the—

Butterfly Weed (Other names: Pleurisy-root, Orange-root)

This bright orange milk-weed is found blooming nearly everywhere in the United States except the far West, from June to September. It is greatly loved by butterflies because in its small deep blossoms they find sweet nectar, which even the long tongues of bumble-bees cannot reach. The pollen lies deep, too, and adheres to the long legs of the butterfly.

The stem has very little milky juice, and the seed pods are not so interesting as those of the Common Milk-weed.

Common Milk-weed

This plant grows in the northern, eastern and middle western part of the United States and is most interesting because of the white milky juice in the stems, and because of the fluffy down in the seed pods. When I tell you about Seed Babies with Wings, I'll tell you more about this milk-weed down.

Just as Bet finished speaking about the milk-weed, there sounded a silvery clock.



One! Two! Three! it chimed.

"Oh," exclaimed Jack. "Oh, can it be possible that it is three o'clock! Bet, you must stop talking and give me a chance!"

"Oh, dear," sighed Eleanor. "Oh, must she stop talking? I am so anxious to learn more about the wild flowers."

"Do you know all I've told about, when you see them?" asked Bouncing Bet.

"No," replied Eleanor. "Do you, Mary Frances?"

"Not all," Mary Frances shook her head.

"Come then," cried Jack and Bet, jumping from the tree. "Come," and they led them among the flowers, and pointed out to them besides the ones mentioned: Wake Robins, Trailing Arbutus, Lupines, Forget-Me-Nots, Columbines, Heather, Laurel, California Poppies, and hundreds of other wild flowers which were in bloom in the outside meadows and fields and woods.

"I'm so sorry we haven't time to tell you the story of each one," said Jack. "Some time next year, please come again and we'll tell you."



"We could come to-morrow, couldn't we, Mary Frances?" Eleanor ventured, but Jack answered:

"No, not to-morrow. Only once a year can flower fairies talk with human beings. It must be to-day. So now, just as quickly as possible, I am going to tell you something about how plants are related to each other, but please be more comfortable. Do take a seat in the grape-vine swing."

Then the girls noticed a hammock nearby, formed by the interlacing of growing grape vines.

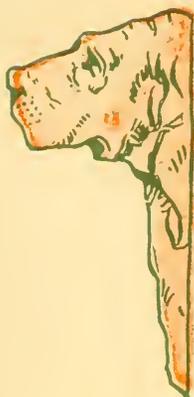
It was wonderfully comfortable, and they leaned back contentedly as Jack took his place in a little green lily-shaped flower growing close by, and Bouncing Bet pranced around on the lawn near him.

"Jack's in his pulpit now," she said. "Hear him speak."



CHAPTER XL

BOUNCING BET AND HER FRIENDS



“YOUNG ladies,” began Jack-in-the-Pulpit, “Bouncing Bet and I have arranged a little play for you. It’s to be this way: after finishing a few introductory remarks, I will call the names of various flower families. Bet has been around to see certain members of each family, and although they are very busy, they have promised to come when she calls—that is, the fairy of each flower or plant that she calls will come to this grassy slope which is to be the stage for our play.”

“How perfectly lovely!” cried the girls.

“But they will have little time to talk,” warned Jack. “So,” he went on, “let me tell you a few facts about—

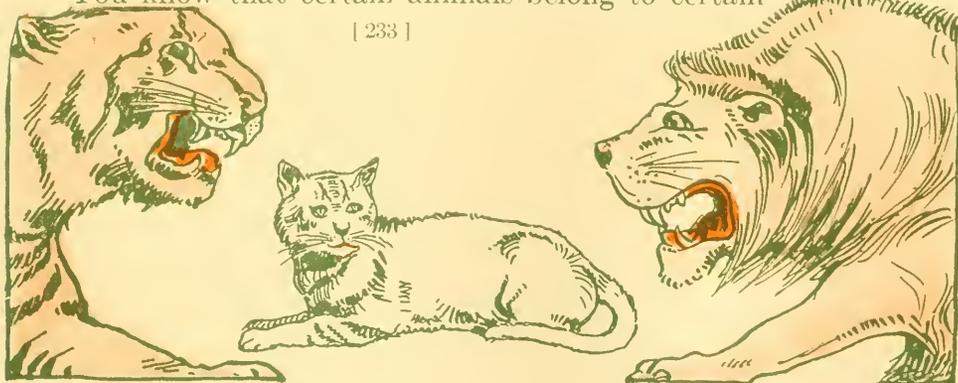


PLANT FAMILIES

“It may surprise you to learn that certain plants belong to certain plant families.

“You know that certain animals belong to certain

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animal families and can easily recognize that gentle Pussy Cat is a near relative of fierce Mr. and Mrs. Tiger, and of Mr. and Mrs. Lion, and of Mr. and Mrs. Panther and all the young panthers, and lions and tigers. They all have some similarity: they all have pointed teeth, and sharp claws, and can lap liquid food with their tongues. They all tread with light, soft-padded toes. There are other members of the Cat Family of which you can think. Even though Mrs. Puss is of near relation, she's mightily afraid of her big relatives.

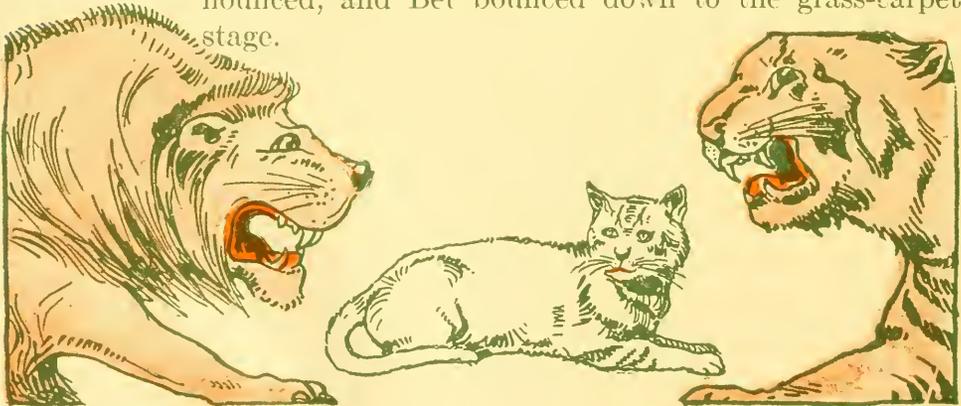


"Now, I wonder if you know that faithful Mr. Dog is own cousin to terrible Mr. and Mrs. Wolf. Indeed, I may be mistaken, perhaps he is their own brother, they are so much alike in some ways.

"Just as animals belong to certain families so do plants. They resemble each other in certain points which you may not notice at first, but which you would readily see if pointed out to you."

Jack drew quite a long breath.

"Now we are ready for the play, Bet," he announced, and Bet bounced down to the grass-carpet stage.



Said Jack, "The first plant family called upon will be the Rose family.

Bouncing Bet blew a long musical whistle by using two fingers at her tiny mouth, and out from some shrubbery stepped a dainty little lady dressed in pink rose petals.

"My name is Rose," she said, smiling and throwing the girls a kiss: "and I'll introduce some of my cousins in the—

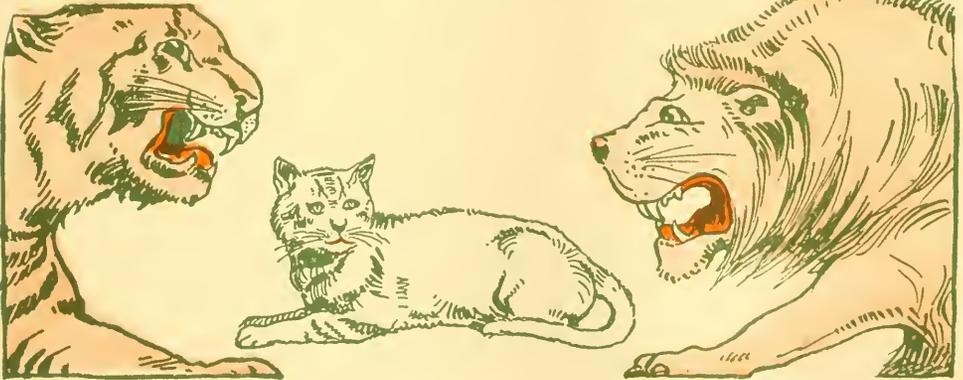
ROSE FAMILY

"*Cherry*," she called. Out stepped a red ripe cherry with a white cap trimmed with green leaves. Of course, the legs were very tiny, nearly like pins. Cherry smiled and bowed and took a place beside Rose.

"*Peach*," Rose called, and out stepped a beautiful peach, with a pink cap, trimmed with green leaves.

"*Strawberry*," called Rose, and surely enough, out came a red ripe strawberry with a white cap trimmed with green leaves.

"*Blackberry*," called the little Rose lady once more, and before the word left her mouth, a big





blackberry came tumbling in, on his head a white cap, trimmed with green.

"Oh, pardon me," said Blackberry, picking himself up. "I was afraid I'd be late."

Rose smiled and motioned the blackberry into place beside the strawberry.

Once again Rose called a name.

"Apple," she called, and roly-poly, "head-over-tin-cups," came a round rosy-checked apple into their midst.

"Excuse me," puffed Apple. "Please excuse my manners, Cousin Rose, but I am so fat that hurrying gets me all out of breath," and he fell in line.

"That will do," interrupted Jack-in-the-Pulpit, "that will do for the Rose family; we will now—"

"Excuse me," interrupted Mary Frances, "but may I ask—if all these are members of the Rose family?"

"There's no mistake," replied Jack. "Now, if you stop to think, you'll realize how very much the blossom of the cherry, and the strawberry, and the blackberry, and the peach, and the apple resemble a wild rose."



"Oh, I do!" said Eleanor.

"And I remember also," added Mary Frances, beaming, "that the seed pods of the roses look like fruit."

"Good!" cried Jack, dancing around.

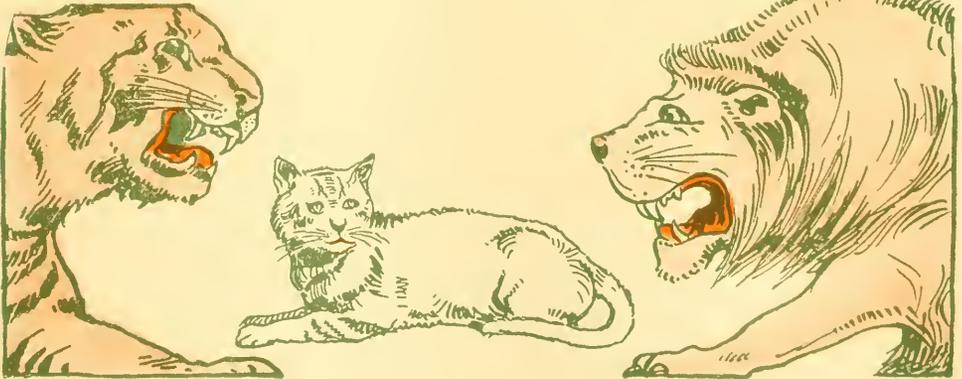
"Good!" cried Bet, bouncing around, and all the members of the Rose families who were present formed a "ring-around-a-rosey," and danced around and around, and at length formed into line near the bush through which they had come.

"Their caps are their blossoms!" exclaimed Eleanor.

"They are," said Bouncing Bet. "Oh, you will always be on the lookout now to find other members of that family, for there are many more. I wanted to call *Bridal Wreath*, but there wasn't time."

"No time, indeed," interrupted Jack. "Now, Bet, call the Night Shade family. They are not so pretty as the Rose family," he whispered, "but just as useful." Bouncing Bet blew upon her fingers.

"Indian file," she called, and out filed several members of the—



NIGHT SHADE FAMILY

There were:

Common Night Shade, a tiny round black pill-like berry with a tiny white cap.

Sand Burr, in a buff coat full of prickles. And what do you think? There was—

Common White Potato, with a ridiculously small bell-shaped green and white cap.

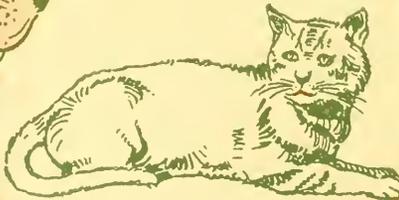
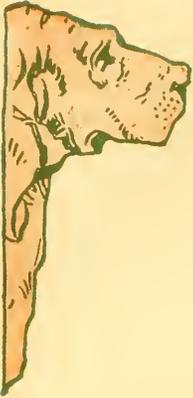
"Oh," Mary Frances could not help exclaiming: "is White Potato a member of the Night Shade family? I thought night shade was poison!"

"I ain't poison—I ain't! Not after I'm cooked!" growled Potato. "You've ate up enough of my brothers and sisters to know that!"

"Hush!" admonished Bouncing Bet. "Keep still! That's terrible grammar, even though you are a common 'Tater,' you ought to speak more correctly than that."

"Excuse me, but we've fed hundreds and thousands of people, and that's more than any of the rest of you can say, even if you don't like my grammar."

"Mercy!" cried a *Tomato*, running in. "Did you forget me?" He was dressed in a bright red, and



wore a tiny yellow cap trimmed with green. "I belong to the Night Shade family, too, and I have fed hundreds and hundreds of people."

"Oh, you Love Apple!" broke in Potato. "Your relatives haven't fed people as long as mine have."

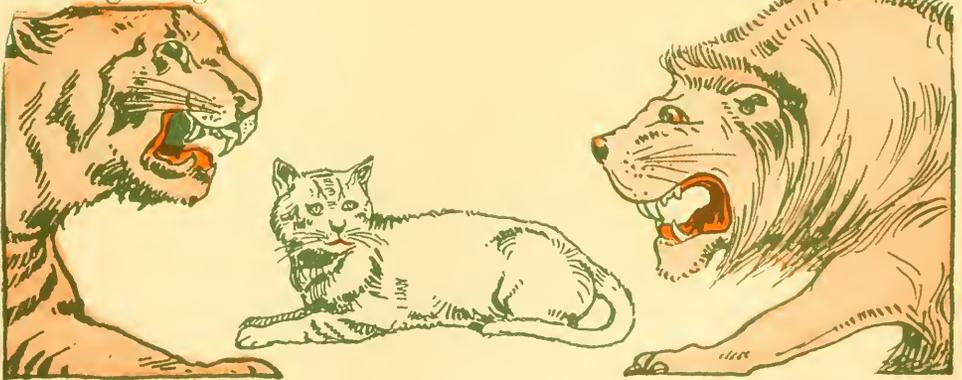
"That must be so," said Mary Frances. "I remember that my grandma told me that when her mother was young, tomatoes were called love apples, and were thought to be poisonous. Grand-mothers raised them in their gardens, though, because they were pretty."

"Poisonous!" Tomato's face turned redder than ever. "Poisonous! Well, I should say! But then, you know how good we are, and that we are excellent for people who eat too much meat."

"Indeed we do know, don't we, Mary Frances? We have some of you in our lunch basket," laughed Eleanor. "Mary Frances has a lot of you growing in her garden, too."

"Has she any of my brothers and sisters growing in her garden?" asked a new voice.

The girls saw the funniest, fattest brown fellow waddling along.





"Hello, Humpty Dumpty!" cried out Tomato.

"Nonsense," declared the new-comer, "I'm not Humpty Dumpty! I can prove it; I can fall and you can pick me up again. See?"

With that, over he went, smash!

The other Night Shade people all ran to help him up.

"How's that, young ladies?" said he when they had set him on his tiny legs. "Doesn't that prove I'm not an egg? Humpty Dumpty, indeed!"

"Oh, you *Egg Plant!*" cried Potato. "Welcome, cousin. You're another useful member of the Night Shade family."

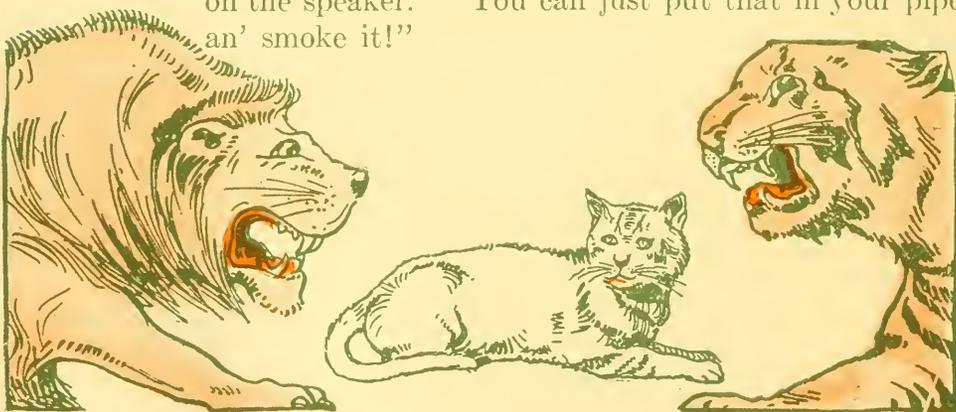
"Perhaps 'you-all' don't like me as well as those other Night Shades, but some folks do."

"Who's that?" asked Eleanor.

"It looks like Lucinda Marguerite, my colored paper doll," replied Mary Frances, laughing.

No wonder she thought so, for the owner of the new voice looked like a little darky, dressed in green, with a long-pointed white cap.

"Some folkses likes me bettah than food," went on the speaker. "You can just put that in your pipe an' smoke it!"



"Tobacco!" guessed Mary Frances.

"Oh, how funny!" cried Eleanor, and they burst into gales of laughter.

"I didn't know tobacco had such a pretty blossom," said Mary Frances, examining the pointed cap more carefully.

"That will——" Jack-in-the-Pulpit began.

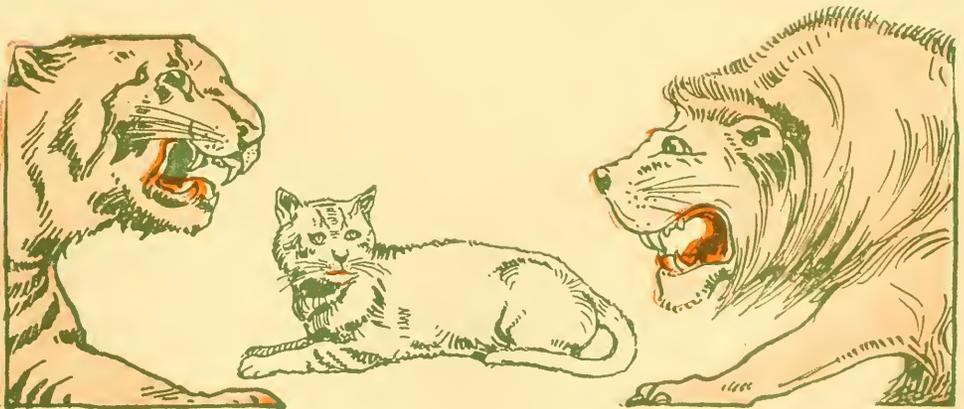
"Wait a minute, wait a minute," cried a new voice, and in danced a beautiful little lady, dressed in a fluffy-ruffly skirt made of flower petals.

"Guess quickly," smiled Bouncing Bet. "Quickly!"

"Petunia," guessed Eleanor. "We have them in a window-box at home."

"What a pretty member of the Night Shade family," said Mary Frances.

"Fall in line," Jack commanded, leaning far out of his pulpit, and pointing out a place where the Night Shade family took their position.



CHAPTER XLI

BUTTERCUP AND DAISY FAMILIES

“THE next family,” announced Jack-in-the-Pulpit, “will be the—

BUTTERCUP FAMILY

At the moment Bouncing Bet whistled, in danced the family headed by little Buttercup.

“My name’s little *Buttercup*,” she sang.

You can imagine how lovely she looked dressed in shiny yellow, trimmed with green.

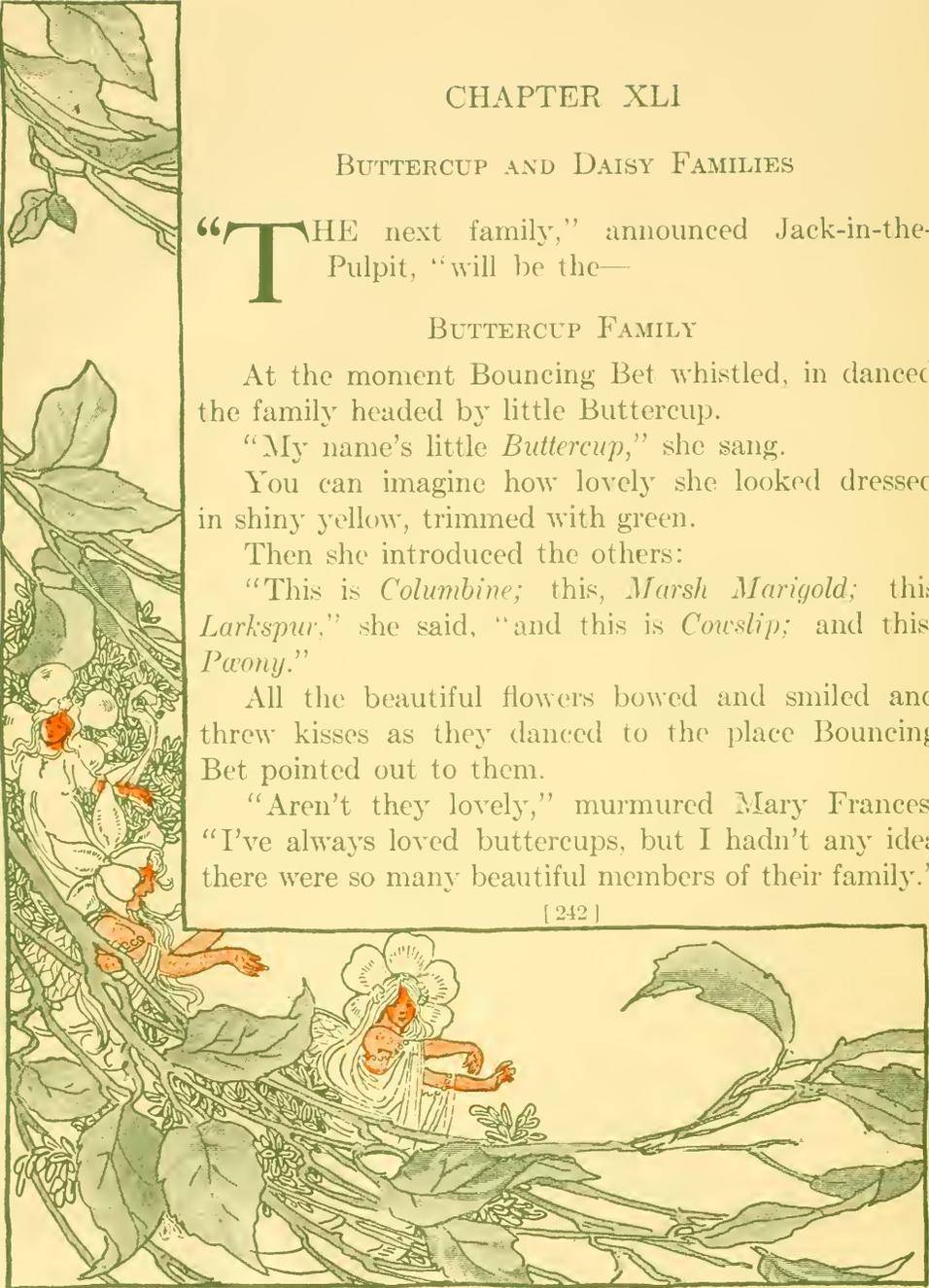
Then she introduced the others:

“This is *Columbine*; this, *Marsh Marigold*; this *Larkspur*,” she said, “and this is *Cowslip*; and this, *Paeony*.”

All the beautiful flowers bowed and smiled and threw kisses as they danced to the place Bouncing Bet pointed out to them.

“Aren’t they lovely,” murmured Mary Frances. “I’ve always loved buttercups, but I hadn’t any idea there were so many beautiful members of their family.”

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"Oh, there are many more," spoke Jack, "but our time is shortening, and as Daisy wants very much to greet you, I shall call for some members of the very large—

SUNFLOWER FAMILY (COMPOSITE FAMILY)

Such a number of flower people came dancing and running in that it was difficult to see who was who, with the exception of the big Sunflower who led them.

"I'm *Daisy*," called a charming gold and white flower fairy. "And I love everybody, no matter whether everybody loves me or not."

"Oh, we love you!" shouted Mary Frances and Eleanor. "You are a dear!"

"I hope you love all the Sunflower family," spoke up a big *Chrysanthemum*.

"Oh, please love me!" "And me!" "And me!" "And me!" begged *Dahlia*, and *Goldenrod*, and *Aster*, and *Cosmos*.

"And me!" said the *Bachelor's Button* in a deep masculine voice.

"And me!" repeated a dudish-looking *Dande-*



lion, at whose comical dress the girls couldn't help smiling, for he was rigged up in the height of an old-fashioned style, with a high collar and a knotted green tie; with "pumps" on his feet—and he carried a grass-blade cane!

"I know they love me!" There stood *Black-eyed Susan*, with arms akimbo.

"We've loved you for years!" declared the girls.

"Here comes that *Everlasting Flower!*" exclaimed Dandelion.

"What a way to speak!" whispered Eleanor; but the speech of Dandelion was soon explained when a crisp *Strawflower*, or "Everlasting," came stiffly in.

"Everlastingly late," said the new-comer dryly, "but nothing like so common as some flowers," glancing at Dandelion.

"Don't disgrace the family by quarreling," warned the big *Sunflower*.

"It's so hard to keep such a big family straight," he said with a sigh, yet he went on proudly, "You see, ours is the very largest flower family. There are from 11,000 to 12,000 members of the Sunflower or Composite Family.



"I wonder how many different kinds of plants are known," said Mary Frances to Eleanor.

"About 120,000," answered Jack, who overheard from his pulpit. "I wish we could show you all the different flower families, and tell you about them, but as we haven't time, we will explain about just a few more. Bet, will you begin?"

Then Bouncing Bet began to speak in her sweet musical voice.

"The *beans* and *peas* you eat belong to the same family as the *clover*. It is the *Pulse* family. The *cranberry* and the *honeysuckle* and the *rhododendron* and *trailing arbutus* are of the *Heath* family."

"And may I ask," interrupted Mary Frances, "to what family you belong?"

"And Jack?" added Eleanor, eagerly.

"Thank you for the questions, dear children," smiled the delighted little fairy. "I will tell you: *Jack-in-the-Pulpit* belongs to the *Arum* family. Calla lily and——"

Here the fairy looked at him and giggled. "Shall I tell them, Jack?" she asked.



"Go ahead," replied Jack a little grimly. "Maybe they better hold their noses while you mention that other member of my family," he suggested.

"Well, the beautiful white calla lily and—and—" Bet hesitated.

"Say on," said Jack, "or I'll tell, myself."

"Well, Skunk Cabbage, then," said Bouncing Bet, "*Calla Lily* and *Skunk Cabbage* belong to Jack-in-the-Pulpit's family."

"Mercy!" Mary Frances exclaimed before she knew it.

"Oh," gasped Eleanor.

"I beg your pardon—indeed, I do!" said Mary Frances to Jack.

"Oh, never mind," he replied, "I must say we are not very proud of that branch of the family, but they have one thing about them which is very interesting. They are the very first flowers in the Spring—oftentimes blooming in February. There are other members of the *Arum* family, though, of which we are prouder."

"He'll tell you about them later," smiled Bouncing Bet.



"Your family isn't the same as his, then?" queried Eleanor.

"No," she replied, "I belong to the *Pink* family."

"Oh," asked Mary Frances, "are all your family pink in color?"

"Oh, no," Jack answered her. "She's all dressed up in her Sunday-go-to-meeting clothes. She just borrowed that 'queen's lace' gown. *Queen's lace* belongs to Wild Carrot, you know, and *Wild Carrot* belongs to the *Parsley* family. Run, Bet, and take off your party clothes. Dress in your own clothes; then they'll recognize you."

Bet bounced away, laughing, and returned almost immediately in her every-day dress of—you know, calico-and-gingham-like petals.

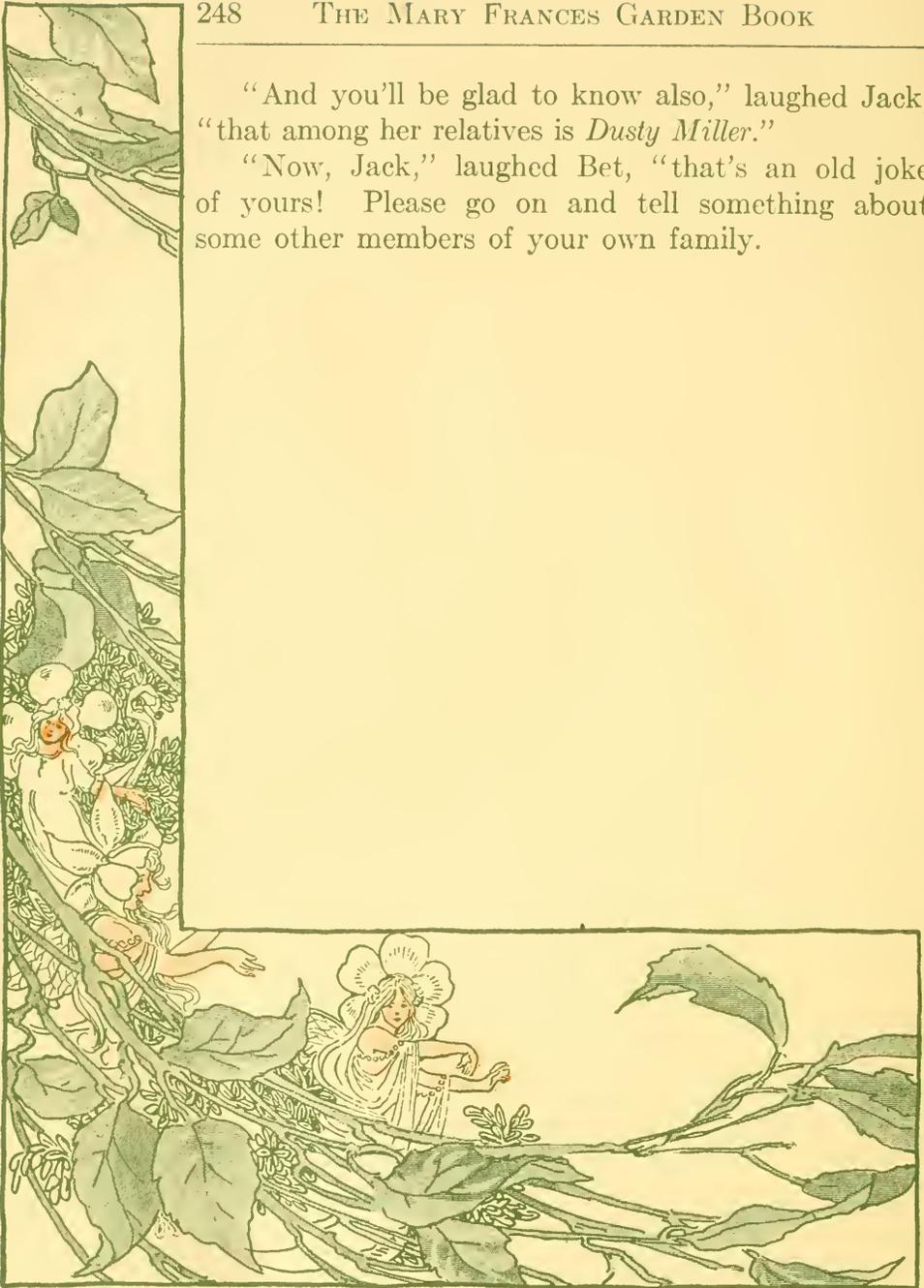
"Now we know you, Miss Bet," cried Mary Frances; "but even your every-day dress is light pink! Are you sure all your family doesn't wear pink all the time?"

"Oh, no," answered Bouncing Bet, "you'll soon see that that is not the case when I mention my cultivated cousin, *Carnation*; and another cousin, *Sweet William*."



“And you’ll be glad to know also,” laughed Jack, “that among her relatives is *Dusty Miller*.”

“Now, Jack,” laughed Bet, “that’s an old joke of yours! Please go on and tell something about some other members of your own family.”



CHAPTER XLII

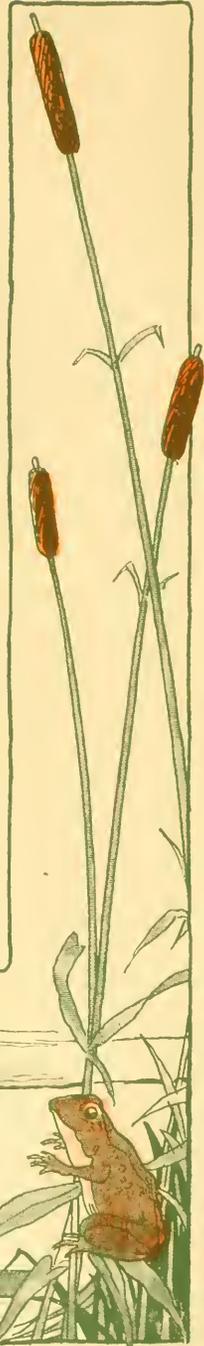
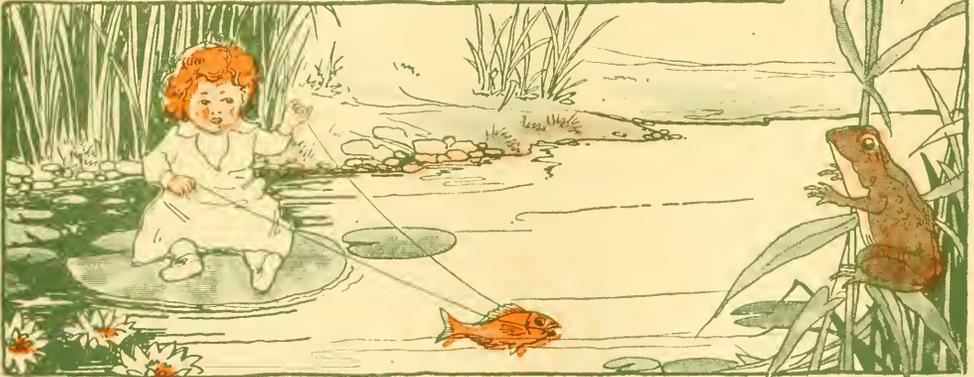
WATER BABIES

JACK cleared his throat and began:
“Well, I don’t want to seem to be too proud or conceited, but to me it is quite a pleasant thing to think that the roots of Jack-in-the-Pulpit, or *Indian Turnip*, which is my other name, have been used as a medicine many a time; and that the roots of my cousin *Calamus*, or *Sweet Flag*, are valuable as a tonic. Some of the *Arum* family like dry soil and some like damp, marshy places. I do not like very dry places myself, and Cousin *Calamus Sweet Flag* likes his feet wet all the time.”

“Isn’t it wonderful,” Mary Frances leaned forward in her interest. “Isn’t it wonderful, how plants growing side by side are so different?”

“They eat the same things, yet are so different,” smiled Bouncing Bet. “For instance, isn’t it surprising that an onion and a lily may grow side by side? By the way, the *Onion* and *Lily-of-the-Valley* and *Tiger Lily* and *Day Lily*, and *Hyacinth*, and *Dog-toothed*

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Violet, and *Solomon's Seal*, and, yes, *Asparagus*, all belong to the same family."

"Oh," murmured the girls, "to think that the onion and the lovely *Lily-of-the-Valley* are cousins and belong to the same family!"

"Yes, and *Onion* is cousin of *Easter Lily*, and *Tulip* too," Bet added.

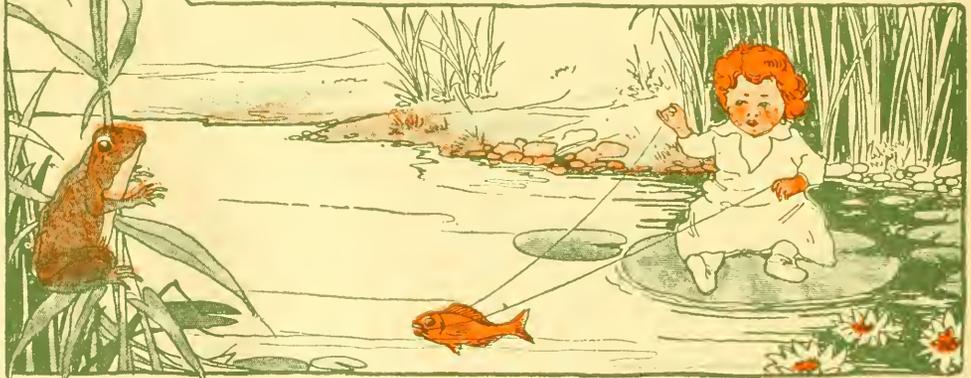
"What about *Water Lilies*?" asked one of the girls.

"Now," answered Bouncing Bet, "you've mentioned another member of the same family as the onion, for by this time, no doubt, you have guessed that I am naming members of the *Lily* family. *Water Lily* is one of their greatest beauties. How she ever manages to be so fragrant, so lovely, living in mire and slime, only her Maker knows. She is our dearest *Water Baby*."

"Oh, please tell us of more *Water Babies*," begged the girls.

"There's a whole family of big water babies, that you know well," Jack broke in. "That is the *Cat-tail* family."

"How interesting!" cried *Mary Frances*. "I thought cats didn't like water."



Just then the silvery bell of the fairy clock struck the half-hour and Jack turned toward all the fairy flower folks who were present.

"Time's up! Thank you, kind friends," said he, "and now, after a dance, you may go."

With that, the sweetest music the girls had ever heard began to play, and the fairies began to dance, keeping time perfectly with their tiny feet.

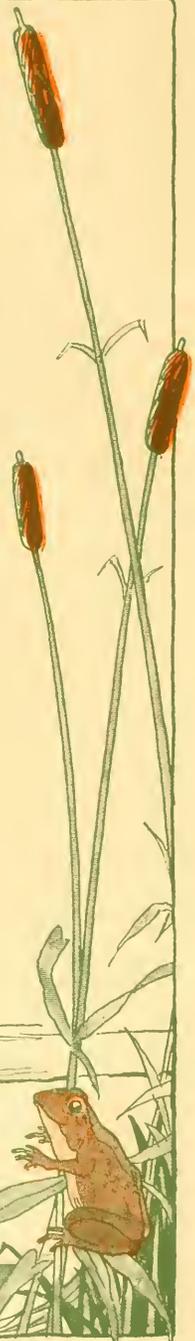
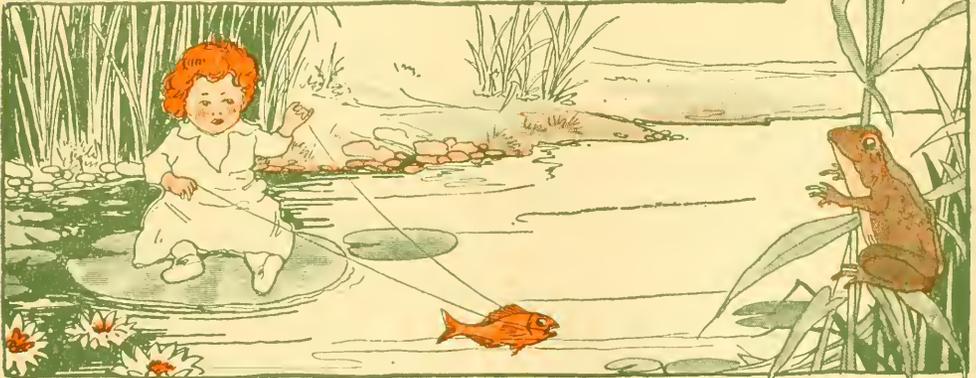
"I'm afraid it's a dream, and that I'll wake up," whispered Eleanor to Mary Frances.

"So am I!" Mary Frances whispered back, and took hold of her little friend's hand.

Suddenly the music stopped and every fairy except Jack and Bet disappeared.

"It was so beautiful," said Mary Frances, still speaking in a whisper, "that we can never thank you."

"We're so glad you enjoyed our little surprise," Jack replied, "for it shows how you love us flowers. Now I want to tell you something about the way in which we grow, and how to feed us. You have a garden, and I feel certain you would like to hear about that."



"I've studied quite a little about seed-babies," replied Mary Frances. "I love the little things dearly."

"Good," cried Bet; "you'll love them even more after you've heard what Jack is going to tell you."

"Do water babies grow in the same way as other plant babies?" asked Mary Frances.

"In quite the same way," replied Jack. "I'm going to show you how the roots of plants take up the food needed, and how the leaves help make that food right for their digestion."

"Why, I thought—" began Eleanor.

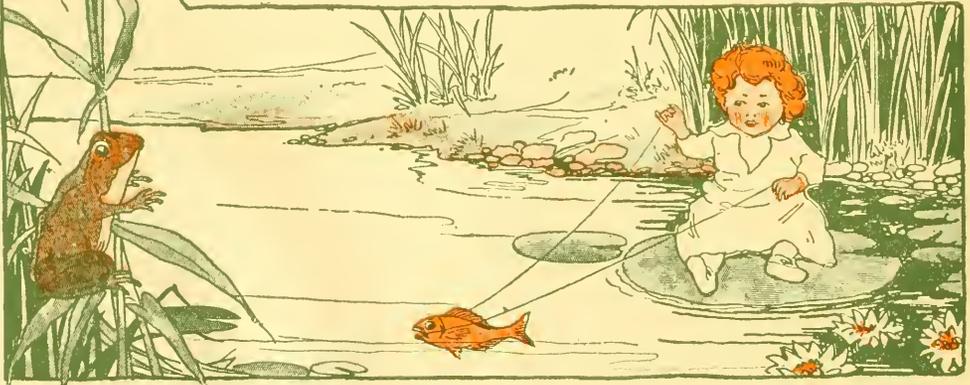
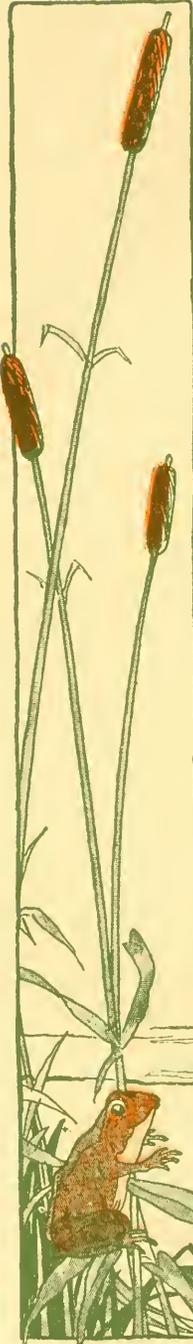
"Yes?" asked Jack, expectantly.

"I thought that plants breathed with their leaves."

"Well, they do breathe with their leaves too, but they also breathe with their stem surface; or, in trees, with the surface of the trunk. In fact, they breathe all over."

"I know," said Eleanor, "that I've been taught to wash the leaves of house plants in order that the leaves might get air."

"Very wise, indeed," said Jack. "Air is very,



very important to the leaves, as you will see when I have told you about their way of growing."

Just then he took a tiny silver bugle from his shoulder and blew a long note.

Four little elves appeared. They were dressed in light brown and dark brown leaves. On their heads, each wore a cap of a different color. One was red; one was yellow; one, tan; and one, pink. They all stood "attention," looking at Jack.

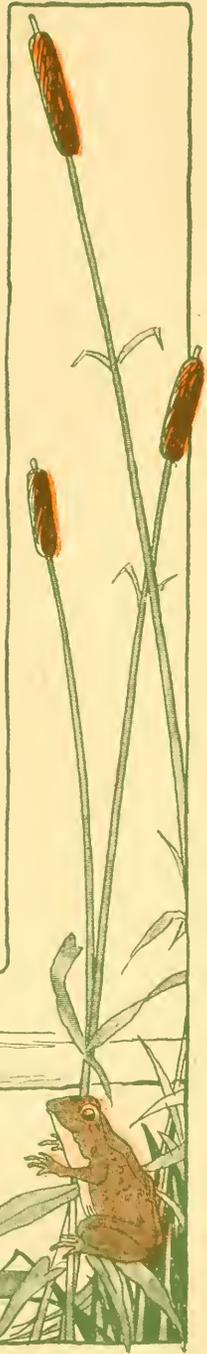
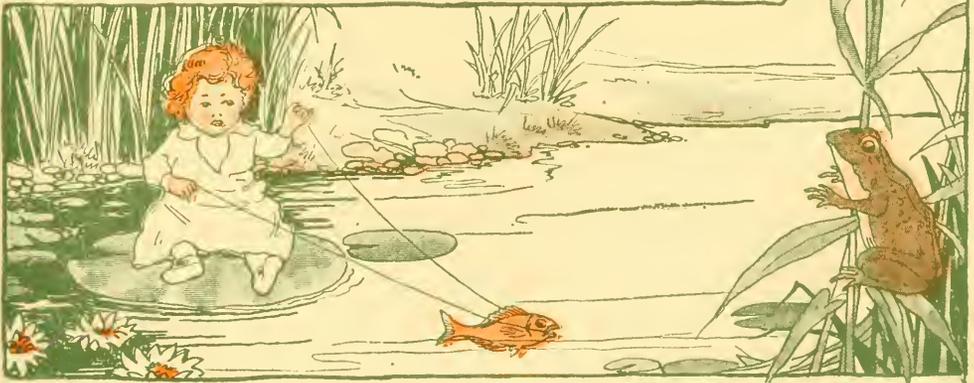
"Bring in the magic tree," said Jack, and off ran the elves.

In a moment they returned, half carrying and half dragging a plant which looked like a tiny tree. It was growing in a glass tub, which, although small, seemed a heavy burden for the little fellows.

"Oh!" Mary Frances sprang up. "Oh, please, let me help," she begged as she stooped down to take it.

"Better not, better not," warned Jack. "That is a fairy tub and will go to pieces if you touch it."

By that time the little elves had it in place, and they smiled their thanks to Mary Frances as they



wiped the perspiration from their foreheads with tiny handkerchiefs made of colored Autumn leaves.

Jack jumped down from his pulpit.

"That will do, attendants," he said. "Thank you," and the little elves ran away.

"We have here," he continued, "a fairy view of the way in which plants grow. Come, Bet!"

With that, both the little fairies sprang to the top of the tub, and a wonderful thing happened.

The tub and the tree began to grow so fast that before you could count three, they were as high as the girls' knees, and before you could count seven, the top of the tree was even with Eleanor's head.

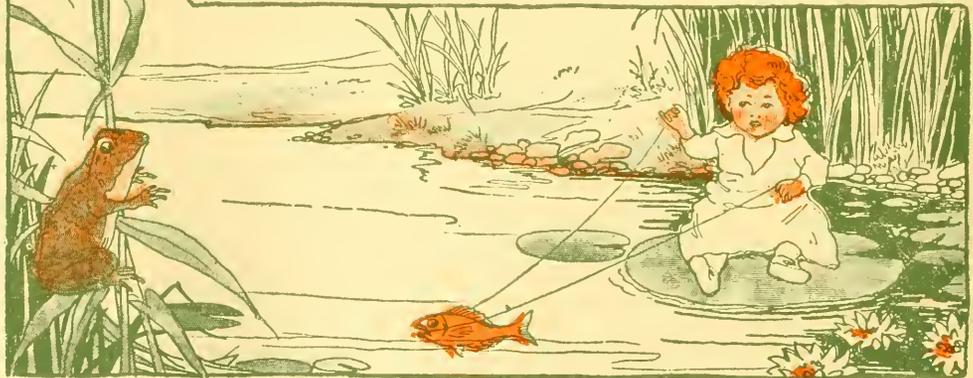
"That's tall enough, tree," cried Jack, and both tub and tree stopped growing.

"Can you see, young ladies," he asked as he bent over the side; "can you see the roots of the magic tree through the glass?"

The girls could see them plainly.

"Did you notice how they pushed their way through the stones and pieces of rock, and even moved them as they grew!"

"I did!" answered each of the girls.



"I thought it wonderful," continued Mary Frances, "but I supposed it was a fairy way of growing."

"No," Jack shook his head; "that is the way all plants grow, whether small or large, only they grow slowly. Notice the smallest roots. They are hollow and have very thin delicate coverings."

"You will see why in a minute," he went on, "but now I wish to call your attention to something else. In between the stones and sand you will notice decaying leaves and——"

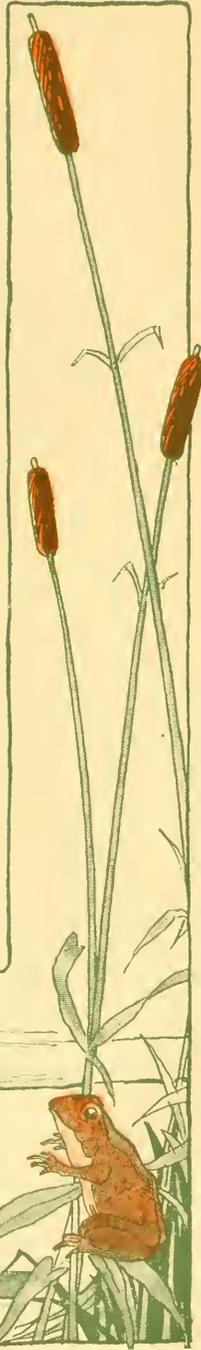
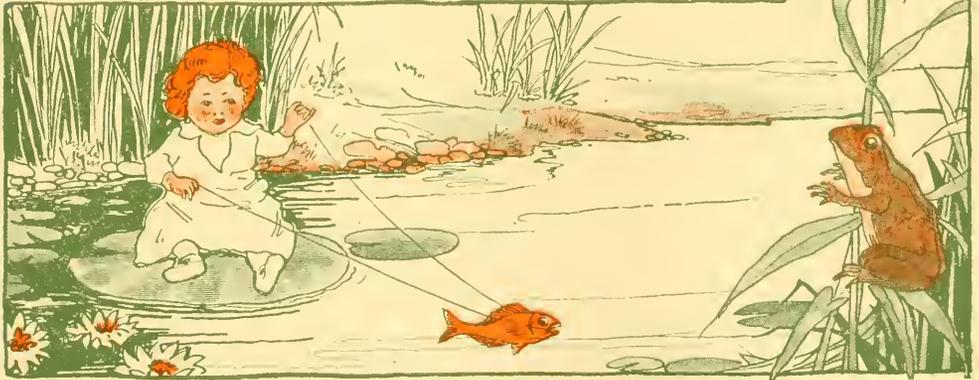
"Humus!" cried Mary Frances jumping up in excitement.

"Good!" he said. "Humus soup is what the plants eat. The tiny roots draw it up through their thin walls. In the humus soup is not only decaying vegetable matter, but very tiny bits of mineral matter, too—like pepper and salt for the plant, maybe."

The girls laughed.

"Listen!" he went on earnestly; "for any plant to produce one pound of dry matter, the roots must take up from 300 to 500 pounds of water."

"Oh, now, I see why plants must have water," said Mary Frances. "Now, I understand why it is



so necessary to cultivate—to hold the moisture in the ground.”

“To make humus soup,” Eleanor added.

“Fine!” cried Jack, rubbing his tiny hands in glee. “It’s splendid to teach such interested persons. It took human beings many, many years to find these things out. If only their eyes and ears had been open to us fairy folks, it wouldn’t have taken so long.”

“Now, human people, in growing garden plants, want to give them the best kinds of food,” he continued. “So, after studying to find out what is in the soil that plants need most, they have gathered those things together from various places, and have made Commercial Fertilizers.

“They are to be had in a powdered form, and are very concentrated plant food. Nothing is better to use, however, than barnyard manures.”

“One of the best commercial fertilizers is Nitrate of Soda.” (See Chapter LVIII entitled, “Some Hints on Growing Vegetables.”)

Continued in Part Three

