

MOUNT VERNON

George Washington's farm home on the Potomac

FARM LIFE READERS

BOOK FOUR

BY

LAWTON B. EVANS, A.M.,

SUPERINTENDENT OF SCHOOLS, RICHMOND COUNTY AND THE
CITY OF AUGUSTA, GEORGIA

LUTHER N. DUNCAN, M.S.,

PROFESSOR OF SCHOOL AGRICULTURE, ALABAMA POLYTECHNIC INSTITUTE,
AND SPECIAL AGENT OF THE U. S. DEPARTMENT OF AGRICULTURE

GEORGE W. DUNCAN, M.S.,

FORMERLY PRINCIPAL PUBLIC SCHOOLS, FLORENCE AND AUBURN,
ALABAMA

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PREFACE

THERE is a persistent and pertinent criticism of the text-books used in the schools of America that the viewpoint and content is too restricted and that the objects and interests of the life on the farm and in the country are not sufficiently emphasized. In Farm Life Readers proportionate emphasis is given to the objects and interests of life on the farm and in the great outdoors.

These books are inspirational rather than technical and informational in content and are as well suited for use in the town and city schools as in the rural schools. City children are keenly interested in life on the farm and in the country. A new interest and meaning is given to the reading lessons in Farm Life Readers.

In preparation of this series of readers, the authors had three definite objects:

1. To furnish to grammar school pupils good literature for practice in reading.
2. To enlarge the reader's ideas of country life, — to open his eyes to the dignity of farm labor and to show the freedom, health, and prosperity that may come to those who live in the country and pursue the business of farming with intelligence and energy.

The material which the authors have gathered to serve these ends may be classified in three groups:

1. A series of articles prepared exclusively for Farm Life Readers are coördinated with the selections of classical literature. These original articles explain and interpret

the selections and have the additional value over the notes of explanation included in many series of readers in that they are good literature.

2. A large number of prose selections, bearing on country life, the farm, and the home. These selections from real literature were all made with the definite purpose of giving the child a larger and better appreciation of the home in the country and of the great business of farming.

3. Poems relating to almost every phase of country life. In selecting these the authors were careful to choose only *real* poetry. These poems are arranged so as to correlate with the original lessons and with the prose selections.

In the faith that the ancient vocation of agriculture deserves to be restored to its former high place in the esteem of the people, and that this calling, pursued in the light of modern scientific methods, will solve for us some of the most important problems of personal and social economy, these Farm Life Readers are offered to a discriminating public.

The authors express grateful appreciation to Professor W. K. Tate, Professor of Rural Education in George Peabody College for Teachers, Nashville, Tennessee, for the preparation of suggestions and questions for this New Edition of Farm Life Readers, and to Professor Z. V. Judd, formerly Professor of Rural Education, University of North Carolina, now head of the Department of Education in the Alabama Polytechnic Institute, and to Mrs. Judd for critical reading of the manuscript of this edition and for many valuable suggestions.

TO THE TEACHER

THE reading period is the country teacher's opportunity. Country boys and girls have had the advantage of coming into intimate touch with the great fundamental ideas which underlie science and literature, but they are handicapped in their studies by a limited vocabulary. To remedy this defect is the greatest duty and privilege of the country teacher. It must be done largely through the reading lesson. During the reading period the unfamiliar words of the text must be translated into the familiar experiences of daily life and given a meaning in the context. The teacher with insight will frequently discover that even words which are pronounced without hesitation are meaningless to the pupil. To look up these words in the dictionary usually throws little new light on the subject, since the synonym found there is frequently as unfamiliar as the word itself. The dictionary is useful to people who already command a reasonably large vocabulary; for the untrained boy or girl, colloquial discussion of unfamiliar words and expressions is necessary to any clear conception of their meaning.

The following general suggestions are applicable to all the selections of this book:

1. Endeavor to awaken in the class a sincere desire to know and use the new words.
2. Have pupils write down or mark in some way the words in each lesson whose meaning is not clear to them.
3. When an unfamiliar word is reached in the recitation, turn the class into a "guessing" contest as to its meaning,

having always in mind the question: "What must it mean to make sense in its context?" The teacher or the dictionary will decide who has expressed the meaning most clearly.

4. Frequently have new words used in original sentences by the pupils.

5. Teach the correct spelling and pronunciation of new words. Teach the pupils how to use the pronunciation key in the dictionary.

6. Do not hurry through the reading lesson; it is the most important period of the day.

The development of the language sense under this method will surprise both teachers and pupils.

In teaching these lessons, pursue, when possible, the laboratory method; that is, illustrate the truths discussed with the actual objects described, and perform the simpler experiments. Read in advance of the class and collect specimens of plants, soils, etc., for discussion. Invoke the aid of the children in this work of collecting. Full recourse should be had to the fields and the forests, and specimens should be gathered or observations made of animals, plants, and soils. As has been wisely said, every bird, insect, flower, tree, rock, and stream in the neighborhood surrounding the schoolhouse should be made a part of the school museum.

In conducting the recitation, question the pupils on the subjects discussed. It will often happen that one of them will know something about the lesson that will be of vital interest to every pupil in the class.

To aid the teacher in conducting the recitation and for the help and guidance of the pupil in the preparation of his lesson, a list of important words for study and a series of carefully correlated questions have been prepared for each selection.

Correlate the work with drawing and with language study. The simpler illustrations and the plants analyzed in class will furnish good models for the drawing lesson.

Your attention is called to valuable sources of help in this work. In each state in the Union there is a state college of agriculture and a state experiment station. Each institution employs a large corps of men and women who are always glad to help the teacher. Get in touch with your state college of agriculture, and ask the help of these students of science who are devoting their time and thought to the subject of better farming. Make an application for whatever free literature the institution is offering.

In almost every county in the Southern States there are a local farm demonstration agent and a girls' canning club agent. Find out who are the agents in your county and call on them to visit your school and help you with your work in agriculture. Have them talk to your pupils and help you in other ways. They will respond gladly.

The United States Department of Agriculture, Washington, D.C., has become an important branch of the Government service, and employs a large number of experienced men and women in agricultural work of all kinds. You can have the advice and assistance of this Department by simply writing and asking for it. A large amount of agricultural literature is published by this Department, and much of it may be had for the asking.

One of the chief factors in the development of a better agriculture has been the agricultural press. Many valuable farm journals are now published. If possible, subscribe to one of these periodicals and keep it on your desk.



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J. W. Castlear

"GREAT, WIDE, BEAUTIFUL, WONDERFUL WORLD"

THE WONDERFUL WORLD

Great, wide, beautiful, wonderful World,
With the wonderful water round you curled,
And the wonderful grass upon your breast, —
World, you are beautifully drest.

The wonderful air is over me,
And the wonderful wind is shaking the tree;
It walks on the water, and whirls the mills,
And talks to itself on the top of the hills.

You, friendly Earth! how far do you go
With the wheat fields that nod and the rivers that
 flow,
With cities and gardens, and cliffs and isles,
And people upon you for thousands of miles?

Ah, you are so great, and I am so small,
I tremble to think of you, World, at all;
And yet, when I said my prayers to-day,
A whisper within me seemed to say —
“You are more than the Earth, though you are such
 a dot;
You can love and think, and the Earth can not!”

— WILLIAM BRIGHTY RANDS.

HELPS TO STUDY

Word Study.

dress — dressed.

cliffs — high, steep rocks.

isles — islands.

Questions and Comments. — We begin *World or Earth* with a capital letter to show that the child is speaking to it as if it were a person. Look out of doors and see the World's beautiful dress. Tell what you see. What is meant by "the wonderful water round you curled"? Do you think the word "curled" is well chosen? In the second stanza what does the wind do? Might not *wind* be begun with a capital, too? What does the author mean by saying that the wind talks to itself? Have you ever heard it? How far does the earth go? What can a child do that the earth cannot?

"AGAIN REJOICING NATURE SEES"

Again rejoicing nature sees
Her robe assume its vernal hues,
Her leafy locks wave in the breeze,
All freshly steep'd in morning dews.

—ROBERT BURNS.

HOW MARY EMILY WAKED UP

Do you believe in fairies? If not, just pass this story and go on to the next. I, for one, have still a place in my heart for the radiant little beings that we call "good fairies," and I have faith that they are about us still, helping us whenever we open the doors and windows of our lives wide enough to let them in.

Yes, I believe in good fairies, and that is the reason I was so glad to hear this fairy story the other day from a friend of mine.

Mary Emily was a little country girl. She lived on an old plantation in southern Georgia with her parents, who were very poor. Like most little girls in southern Georgia, Mary Emily was blessed with a number of brothers and sisters. They were all younger than herself except one big brother who was away at an agricultural college. I must acknowledge to you that before the fairies came Mary Emily did not count these brothers and sisters as "blessings." She rather thought of them as "nuisances," and she was sometimes even wicked enough to wish that she did not have them at all — but, you see, that was before the fairies came.

However, I must hurry on. I told you that Mary Emily's parents were poor, but I did not tell you how poor. The sad truth is that they were poor in the very worst way — in the way that makes one lose hope and cease to care. Her father worked hard enough, but somehow he never succeeded. He called himself "unfortunate," and complained of his "bad luck." Her



SHE SAT UP AND LOOKED AROUND

mother worked hard, too, but she was too indulgent with her children to make them work as they should; and after she had given all her strength to the more vital tasks of the home, she simply had to let the rest go.

Well, things went from bad to worse till Mary Emily's thirteenth birthday, when they took a sudden turn for the better. That was when the first of the fairies came on the scene. On the morning which ushered Mary Emily into her "teens," the little girl was awakened by a voice that she had never heard before.

"Wake up," it said, "wake up."

"I am awake," the child protested, and she sat up in bed and looked around. It was early, — so early that nobody was stirring, not even father and mother who slept in the next room and were always the first to get up. Her little brothers and sisters were sleeping near her. Surely it was not one of them who had spoken.

"Wake up," something whispered again.

"I tell you I *am* awake!" and she began scrambling around on the dusty floor for her stockings, which she found after much trouble.

"No, you are not," said the voice, "you've been asleep for thirteen years. Wake up and look about you. Look at your stockings, for instance."

Strange to say, Mary Emily felt no fear of the voice. She only stared at her stockings with an awakened interest.

"They need darning," suggested the voice.

"Yes," said Mary Emily.

"They've needed it for some time," continued the voice, "but you've been asleep and did not see."

"I'll — I'll darn them," replied the little girl by way of apology, and she got her feet clad very much more quickly than usual, for she was glad to get her shoes buttoned over those accusing holes.

"Wake up," said the voice, "*wake up!*"

"Wake up!" exclaimed the little girl. "Do you not see that I am awake and dressing as fast as I can?" But she just then caught sight of herself in the looking glass and stopped short.

"You went to bed last night without washing your face and hands," suggested the voice.

"Yes," said Mary Emily, and she set about the dreadful task of combing the tangles out of her shining hair.

"If you had brushed it thoroughly and plaited it last night, it would not have been so hard to comb, and you would not have ruined it by breaking it off," said the voice.

"Yes," answered Mary Emily.

"You see you've been asleep," said the voice.

"Yes," admitted Mary Emily, and she hung her head.

"You will really have to wake up," continued the voice.

"I'll try," replied the little girl.

And all the time that she was dressing the voice kept whispering, "*Wake up!*" and every time it spoke Mary Emily saw something ugly and neglected to which her eyes had been closed, up to this birthday morning. There were snagged places in her underskirt that she had not mended; buttonholes were torn out, and buttons were missing on nearly every garment that she put on. And all the while Mary Emily kept apologizing. She

got a needle and thread and did some much needed mending, but still the voice was not silenced.

"Wake up!" it would say.

"Yes, my clothes are on the floor! There now, I've hung them up."

"Wake up!"

"Oh, I see that lint under the bed — No, I do not usually sweep under the bed, but I will to-day."

"Wake up!"

"Yes, yes, the room does smell musty, but I will hang out the bedclothes in the sunshine to-day, and I'll open every window to air the room. What is that you say? I ought to sleep with all the windows open and never let the place get musty? Well, well, I'll try it to-night, if the others do not object."

The air of the close room proved so disagreeable to the little girl, now that she was awake to its mustiness, that she hastily completed her dressing and hurried out into the cool fresh air.

"You might have been breathing this all night," suggested the voice as Mary Emily stood taking in great, deep breaths of the life-giving air.

"But would not the night air make us sick?" asked the little girl.

"No. Doctors are making sick people sleep out in the night air, and they are getting well."

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

"Wake up, Mary Emily, wake up."

"Oh, what is it now?" exclaimed the little girl, looking about her quickly, first in one direction and then in another. And then, "I see, oh, I see!" she exclaimed.

And she did see. She saw a forlorn looking yard stretching out in front of her, the rail fence of which was down in many places. She saw last year's weeds, waist high, in the fence corners, while near the steps the earth was hard and packed and sterile looking. There were tin cans and broken bottles, dead limbs of trees, and old rags and papers scattered about.

"Wake up," said the voice.

"Oh, I am awake now," cried the child in disgust.

Mary Emily descended the half fallen front steps carefully, and went on a tour of inspection about the place. Yes, they had been in the habit of throwing the garbage over the front fence to the pigs. It had seemed convenient to let them roam at large in the woods, and nobody had ever thought of arranging for them to approach from the back. Mary Emily had to acknowledge to the voice, which insisted on going with her, that this was a very bad arrangement, indeed. She was compelled to admit, also, that the barn, the henhouse, and the well house, all needed to be braced up a little.

"Tom is coming home from college to-morrow for a few days' holiday," suggested the voice.

"Yes," said Mary Emily; and her face brightened. She had never counted her big eighteen-year-old brother as one of the "nuisances."

"Why don't you clean up for him?" asked the voice.

"I will," said Mary Emily.

With this, Mary Emily ran back into the house and hurried the four little nuisances into their clothes, for mother was up and cooking breakfast.

At the table that morning something wonderfully

nice happened. The worn and discouraged looking father took a second and interested look at Mary Emily and then leaned toward her and lifted her face to the light.

"You look as your good mother used to this morning," he said.

This seemed the time of all others to get what she wanted, so the little girl asked promptly, "Father, lend me Billy and Jeff to-day."

"What for?" he asked in surprise.

"I want to clean up the yard for Tom, and it will take all five of us."

"Have you asked your mother to lend you Janie and Sue and yourself?" he asked with a smile.

"If she can get anything out of Janie and Sue or herself either, I surely am willing," said the mother wearily. "They are no help to me." Mary Emily suddenly awoke to the fact that she and the other nuisances — for she now numbered herself with them — were largely responsible for the bowed shoulders and tired eyes of that best of mothers, and something rose in her throat at the thought.

After breakfast, she and the others held a council. Billy and Jeff, aged twelve and ten respectively, were glad to help in the yard, for it looked more like play than the field work that had been laid out for them. Janie and Sue, the twins, were rebellious, however. You see, they had been asleep all the eight years of their lives, and no good fairy had yet come to wake them up to the ugliness and disorder about them.

Then Mary Emily made her first great sacrifice.



She promised the twins her doll things, provided they would work with a will till the place was in order. The yard cleaning was delayed a little, however, while Mary Emily gave her room a thorough sweeping and hung out all the bedclothes in the sun — she was under promise you see.

Then she and the others went to work on the big front yard. All five of them armed themselves with heavy sticks and played at war by battling down the tall, dry weeds. The boys got heavy rakes and began the work of general cleaning. The girls helped by piling up the dead limbs for burning, and by stacking the scattered brickbats that lay about, into neat piles under the steps. When all the rubbish was raked together in one big heap, the children set fire to it and had a war dance around it that was great fun.

All through the day Mary Emily seemed to be guiding and directing the work at every step, but it was really the voice that led the way.

"Wake up," it would whisper and her eyes would be opened to a new ugliness. There was rubbish under the house. Yes, there wasn't any sense in raking the whole yard and leaving old bottles and cans under the house, so that had to be raked out, too.

"Wake up," the voice would whisper, and Mary Emily would see that the peeping grass and weeds of the early spring ought to be scraped out of the walks so as to leave them well defined.

"Wake up" the voice would urge again, and Mary Emily would rule that the ashes from their bonfire should be wheeled to the gully in the back lot and deposited there to help fill up the hollows.

Mary Emily had her troubles. The nuisances would get tired every now and then and threaten to strike, and it would take all her arts of persuasion, as well as the promise of every doll rag that she had in the world, to keep them at work. Besides, she had to work twice as hard as any one of them to keep them satisfied.

But Mary Emily had her reward. When her father came back from the field for dinner and found the big front yard as clean as could be, he told her that she was very much as her mother used to be; and he smiled as she had never seen him smile before.

After dinner was over, the father announced that he was going to take an afternoon off from the field work to help with the back yard, if Mary Emily would show him how.

When the good fairy took a last survey of the scene that night, she could not find so much as a chip out of place in all that big yard, back or front; and papers and old tin cans were things of the past. And the fairy smiled and slipped in through one of the now wide-open windows of the room where the children lay sleeping deeply, breathing in the sweet fresh air. She touched the little nuisances lightly and lovingly as she passed, but she stopped at the pillow of a child whose face and hands had been made clean for the vigil, and whose shining hair had been braided carefully against "witch stirrups."

"Mary Emily," said the fairy, waving her light wand over the sleeping child, "Mary Emily, sleep! But when you wake again, wake indeed."

— FRANCES NIMMO GREENE.

HELPS TO STUDY

Biographical.— Miss Frances Nimmo Greene is an American author and teacher. Among her best known and most popular books for children are "King Arthur and His Court" and "With Spurs of Gold." Her most recent books are "The Right of the Strongest" and "One Clear Call."

Miss Greene wrote exclusively for Farm Life Readers, "How Mary Emily Waked Up," "A Red-Haired Fairy," "Boy Scouts," and "Camp Fire Girls," in Book Four; "A Tragic Mistake," "The Cultivation of Pure Fun," in Book Five. She re-wrote and edited all the original articles in both books to which no name is signed as author.

Word Study.

ra'di ant — beaming with happiness.

ac knowl'edge — own, admit.

nui'sance — a person or thing that annoys or gives trouble.

in dul'gent — disposed to withhold restraint, yielding to the wishes of those under one's care.

vi'tal — highly important, very necessary.

ush'ered — conducted, brought.

pro test'ed — declared solemnly.

a pol'o gy — an acknowledgment of fault, an expression of regret.

ac cus'ing — charging with a fault.

lint — fluff from cotton, etc.

for lorn' — in a wretched condition.

ster'ile — producing little or no crop.

gar'bage — waste animal and vegetable matter from a kitchen.

braced — propped, supported.

coun'cil — a meeting for consultation or advice.

re bel'lious — disposed to resist authority.

sac'ri fice — something given up in favor of a higher duty.

sur'vey — view.

Questions and Comments. — Does each of us have the kind of fairy Mary Emily had? Why do you think Mary Emily's parents had "bad luck"? What were some of the things that Mary Emily discovered when she "woke up"? Why do you think she had not seen them before? How was she able to accomplish so much in a day? How can each one of us help to make the home surroundings pleasanter and more wholesome? What is meant by a "tour of inspection"? What are "witch stirrups"?



Otto Gebler

LITTLE BROWN HANDS

They drive home the cows from the pasture,
Up through the long shady lane,
Where the quail whistles loud in the wheat fields
That are yellow with ripening grain.

They toss the new hay in the meadow,
They gather the elder bloom white,
They find where the dusky grapes purple
In the soft-tinted October light.

They wave from the tall rocking tree tops,
 Where the oriole's hammock-nest swings ;
 And at night-time are folded in slumber
 By a song that a fond mother sings.

Those who toil bravely are strongest,
 The humble and poor become great,
 And so from these brown-handed children
 Shall grow mighty rulers of state.

The pen of the author and statesman,
 The noble and wise of the land,
 The sword and the chisel and palette
 Shall be held in the little brown hand.

— M. H. KROUT.

HELPS TO STUDY

Word Study.

lane — a narrow passageway between trees and shrubs.

tint — a faint tinge of any color.

slum'ber — sleep.

states'man — a man versed in the principles and art of government.

chis'el — the instrument that sculptors use in making statues.

pal'ette — a thin oval or square board, with a thumb hole on one end for holding it, on which a painter mixes his colors.

Notes and Questions. — By what other names is the quail known? Give the whistle of the quail. Describe the elder bloom. What kind of grape is meant in the second stanza? What is meant by "soft-tinted October light"? Where does the oriole live? Describe the oriole's nest. What do brown-handed children often become? What is the meaning of the last stanza?

HOW MARY EMILY OBEYED THE FAIRIES

When Mary Emily opened her eyes early the next morning, she really waked up. No more stupid, lazy, unseeing carelessness of everything for Mary Emily. No, indeed! As soon as her bare feet struck the cold floor, she began to see things that needed her attention, and her plans for the day were all laid by the time she was dressed.

The other children arose early, too, for if you will believe me there is little chance to sleep late when a thirteen-year-old girl has had a visit from a good fairy.

All the bedclothes and the rugs were hung out in the sun that morning, while the girls swept the floors and dusted the walls thoroughly. The floors looked very clean, too, for poor, overworked mother had scoured them the day before in honor of Tom's home-coming. Then Mary Emily did the unheard-of thing of taking down the pictures and dusting them before hanging them back in their places, even going so far as to wash the glasses over them.

The washing of the picture glasses suggested to the little home maker that the looking-glass needed to have its face washed, too. No sooner thought than done!

When Mary Emily turned her back on the brightly polished mirror, the clouded, dirty panes of the windows fairly forced their untidiness on her attention. It is a terrible thing — this waking up! But it is a very blessed thing, too.

The twins were willing to help to-day, for the hour of the big brother's home-coming was near at hand; so the process of getting the windows washed clean, in and out, was not a long one after all.

But no sooner were the window panes shining like crystal, than Mary Emily waked up to the fact that the high places on all the furniture — such as the head of the bed, and the top of the mirror frame on the bureau — were gray with dust. The floors and the walls were already cleaned. To brush off that dust would only send it flying through the air to settle at last in other parts of the room. Mary Emily thought and thought, and at last decided to get rid of that dust. She took an old cloth, and after dampening it thoroughly, she carefully wiped off all the dust from the furniture.

About this time the twins deserted her, and she shortly saw them disappearing over the hill beyond the barn. Mary Emily watched them with a sinking heart, and then went back to her work. While she was standing on a chair, wiping the dust from the mirror frame, her glance fell on the high mantelshelf. It was dingy and gray with dust. It was full of old medicine bottles and boxes, of weevil-eaten packages of seeds, and of folded papers the edges of which were yellow and brown with age. Have you ever seen a mantelpiece like that? Well, Mary Emily had never really seen one before, either. You see, she had only yesterday begun to wake up to the real state of things.

But Mary Emily was tired, and the sight of that mantelpiece was too much for her. She put one arm up to her eyes and stood very still. Two or three big

tears rolled down her cheeks and dropped on the front of her dress. Just then her father entered the room in search of something.



SHE PUT ONE ARM UP TO HER EYES

He looked at her a moment in surprise, and then lifted her down from the chair, keeping his arm about her as he asked, tenderly,

“What’s the matter with father’s brave girl?”

Somehow that word “brave” was just what she needed, and Mary Emily dried her eyes and looked up at her father smiling as best she could.

“I am trying to clean up,” she said, “and every time I think I am nearly

through, something awful like that mantelpiece presents itself to me.”

“Sit down here on father’s knee and rest a bit, and then we will tackle it together,” he replied.

Surely a new world was opening for her! Yesterday the father, who had heretofore always seemed a little worried with her, had twice said that she was like her

good mother. Two minutes ago he had called her his "brave girl," and now he was holding her on his knee.

And as she sat there with her father's arm about her, Mary Emily told him all that she and the others had been doing, and her little heart beat hard as she saw the look of genuine delight in his eyes, as he surveyed the beautifully clean room. Then her father told her about the neat home her mother had kept before her health failed her and her burdens had accumulated. Mary Emily could nearly see it as he talked, and her heart almost burst with joy as he said, "Yes, daughter, it was just as sweet and clean and homelike as you are making it to-day."

That settled it. Mary Emily was not going to be discouraged by any number of dirty mantelpieces after that, and she hurried back to her work. Her father was as good as his word, too, and she really needed him, for only he could say what things should be thrown away and what consigned to the unused medicine chest in the corner.

As she and her father worked together like two good comrades, Mary Emily said:

"I am strong like mother used to be, so I am going to have a place for everything and keep everything in its place. And I am going to clean all the drawers and boxes, too, father."

"And I want you to bring out all the clothes from the closets and trunks and sun them thoroughly."

"I'll do as you said mother used to do, and have a certain day in the week to clean each room thoroughly," answered the child.

"If you will take hold like that, Mary Emily," said her father, "and plan a real system of work, I will make the other girls do their share. After Tom's visit is over, let's sit down and make out a schedule of daily work for each one."

They talked on together, each one thinking, at every sentence, of some new thing to be done for the home; and Mary Emily was so interested she was scarcely conscious that she scoured the brick hearth after her father had taken out the ashes.

The hearth being scrubbed, Mary Emily suddenly waked up to the fact that there were great, smeary places on the doors where the children's hands had touched in closing them. Those smeared places had been there for a long time but she had never seen them until that day. They were never there again after Mary Emily saw them that day.

As the little girl was finishing the last door casing, her mother came in with an armful of dogwood blossoms.

"Honey," she said to Mary Emily, "you have worked so hard to make things look clean that I made Jeff go to the woods and get you these with which to decorate. Hurry and arrange them, for Tom will be here in a few minutes, and dinner is all ready."

When Tom came — red-headed, whole-souled, and joyous — he was met on the doorstep by a little girl who had found time to make herself clean and neat for his coming. The others were ahead of her and had met him at the gate, but Mary Emily did not mind, for the very first thing Tom said was:

“What have you all done to this old place? Whoever would have thought it could look so neat!”

He took Mary Emily’s chin in his hand and raised her face and said, “Look here, Mary Em, what on earth have you done to yourself? You used to be too sleepy and stupid looking to be pretty!”

—FRANCES NIMMO GREENE.

HELPS TO STUDY

Word Study.

crys’tal — finest glass.

wee’vil-eaten — eaten by weevils, a kind of beetle.

ac cu’mu la ted — piled up, grown in numbers.

con signed’ — transferred to.

sys’tem — regular method or order.

sched’ule — a list, a table.

smear’y — soiled.

Notes and Questions. — What did Mary Emily do the next morning? What was done with the bedclothes? With the pictures? How was the dirt removed from the furniture? Why is it better to wipe away dust with a cloth than to use a feather duster? Why was Mary Emily discouraged? How did her father encourage her? Of what advantage is systematic work? Can you suggest a schedule of work for your own home?



EVENING ON THE FARM

From out the hills when the twilight stands,
Above the shadowy pasture lands,
 With strained and strident cry,
Beneath pale skies that sunset bands,
 The bull-bats fly:

From woods no glimmer enters in,
Above the streams that, wandering, win
 From out the violet hills,
Those haunters of the dusk begin,
 The whippoorwills.

Adown the dark the firefly marks
Its flight in golden-emerald sparks ;

And, loosened from its chain,
The shaggy watchdog bounds and barks,
And barks again.

Each breeze brings scent of hill-heaped hay ;
And now an owlet far away,
Cries twice or thrice, "T-o-o-ho-o-o" ;
And cool dim moths of mottle gray
Flit through the dew.

The night is still. The slow cows chew
A drowsy cud. The bird that flew
And sang is in its nest.
It is a time of falling dew,
Of dreams and rest.

The brown bees sleep, and round the walk,
The garden path, from stalk to stalk
The bungling beetle booms,
Where two soft shadows stand and talk
Among the blooms.

The stars are thick ; the light is dead
That dyed the west ; and Drowseyhead,
Tuning his cricket-pipe,
Nods, and some apple, round and red,
Drops over-ripe.

Now down the road that shambles by,
A window, shining like an eye
Through climbing rose and gourd,
Shows where toil sups, and those things lie —
His heart and hoard.

— MADISON J. CAWEIN.

HELPS TO STUDY

Biographical. — Madison Cawein was a native of Kentucky. He was born in 1865 and died in 1915. His writings show a great love of nature, and his ability to bring out her hidden beauties and meanings was marvelous.

Word Study.

stri'dent — harsh, shrill.

haunt'er — one who frequents a place.

whip'poor will — a bird of Eastern United States or Canada, so called from its note.

owl'et — a small owl.

mot'tle — to mark with spots of different colors.

bun'gling — awkward, unskillful.

Notes and Questions. — What are the signs of approaching night on a farm? Describe bull-bats. Of what service are they? Why are whippoorwills called "haunters of the dusk"? Have you ever seen violet-colored hills? When do hills and mountains look purple? What is meant by "adown the dark"? What is a firefly? How does it make its light? What are moths? Does dew really fall? Tell how it is formed. What is a cow's cud? What does "a drowsy cud" mean? What is meant by the road that "shambles by"? What makes the window "shine like an eye"? What is meant by saying that "toil sups"? What time of year does the poet describe? How can you tell from the poem?

A RED-HAIRED FAIRY

On the morning after Tom arrived, he and Mary Emily sat on the rickety front steps and talked of many things. The little girl told her brother how "something" which she laughingly said must have been a "fairy" had awakened her the other day and had shown her how unclean and disorderly were their surroundings.

Then Tom said that he was going to be another fairy — a red-haired fairy — and would show her a few things more.

"You see," said he, "what a change you worked by merely cleaning up. Well, if we would put a little thought into it, we could work still greater wonders; we could make this old place simply beautiful, and we could make it wonderfully productive, too. The truth of the matter is that here in the South we have absolutely golden opportunities, to be had for the taking. I did not know it until I went to school and began to learn how to do things in the best way."

"What are golden opportunities, Tom?" asked the little girl. "Did you learn those big words at school?"

Tom laughed.

"Golden opportunities, Emily, are just 'good chances.' If you want to know what good chances are, they mean, for us, the best combination of soil and climate that can be found on earth. Why, we can grow anything in the South."

"I thought," said Mary Emily, "that things were pretty bad for farmers — I thought we were very, very unfortunate."

"Well, you thought wrong! And let me tell you something. Drop that word 'unfortunate' and say 'unknowing' instead. I tell you when we learn to study our business as a business, as men do in cities, we will succeed. When we are keen to learn the last word on the science of farming, just as business men are keen to keep up with the very latest and most approved methods in whatever work they are doing, we will find our 'golden opportunities.' When we work at our farms as city men work in their offices, day in and day out, early and late, all the year round, instead of 'laying by' with the crops, we'll become wealthy."

"Tom, father works harder than anybody I know."

"So he does. But he plants the same crop on the same land, year after year, and keeps the same old scrub stock. But he says he's going to let me try next year. I am going to graduate in June."

"Why wait till June to begin?" suggested the child.

"You are right," exclaimed Tom with delight. "Why wait?" Tom was on his feet in an instant, and had pulled her up by both hands.

"We'll begin work this minute, Mary Emily. What would you rather we'd tackle? I have three whole days at home, and I am yours to command."

"I would rather have you help father."

"I offered to this morning, but he would not let me."

"Can this yard be fixed?" asked the little girl, with a great hope in her eyes.



“IT CAN BE MADE TO LOOK LIKE A PICTURE”

“It can be made to look like a picture!” answered Tom.

“But what about that old fence, and this bare, hard ground!” said Mary Emily, a little discouraged.

“A rail fence is the prettiest fence in the world. Rich people are putting them around their country homes with blooming vines running over them because they are so pretty.”

“But we have no flowers, Tom, and we have no money with which to buy them. I am willing to work as hard as ever I can, but I do not quite see my way.”

“Good enough, if you are willing to work, I’ll show you the way. And do not you be bothered about flowers. Yonder in the woods are vines and flowers that other people hundreds of miles away buy — flowers that you

and I have never learned to appreciate. Let us plant the whole yard in grass. The best grass we can possibly buy for our purpose is all about the country here in patches. Bermuda is the grass we need, and it is right here at hand.

"Then we will get some honeysuckle from the woods and plant it all along that beautiful, picturesque fence of ours, and next year it will be a mass of blossoms. And we will get some yellow jasmine and start a vine halfway between each two trees in that long row yonder. As soon as they grow large enough, we will train them up the trees on each side, so that in time we will have a string of golden blossoms looped from tree to tree."

"And Cherokee roses, too, Tom! Let's have Cherokee roses," exclaimed Mary Emily.

"Certainly, we will plant a hedge between the back and front yards."

The two were as good as their word. Tom began by scattering a generous supply of stable manure and rotting leaves over the yard to make the soil rich. He hauled the manure from the stable yard, and the leaves from the woods. Then he got a horse and plow and turned the whole yard up, running his furrows deep. Next, he harrowed the ground till the clods were all broken up and the earth was as fine as powder.

"You see," he explained, "the main thing is to get the soil broken deep and broken well. Then it must be fertilized thoroughly and mixed with rotting vegetable matter so it will hold moisture for the plants."

When the entire plowed surface was as smooth as a floor, Tom laid it off in little shallow drills about

ten inches apart. Then he and Mary Emily hunted about the lot and the fields for clumps of Bermuda grass, and soon returned with a wagon full of roots that were just beginning to send up tiny green shoots. These roots Tom separated, and he and Mary Emily and the twins planted them carefully in all the drills till the whole yard was covered.

After that they lined their beautiful rail fence with honeysuckle shoots. The next thing was to plant the Cherokee hedges, and this was easy, for Cherokee roses grew wild all about them. It was a harder matter, however, to transplant the yellow jasmine vine, but Tom told them how to do it successfully.

"First, you must get it while it is blossoming," said he, "and that is right now. Then you must be sure not to break the tap or main root." The taproot of the yellow jasmine is very long, so they had to dig deep. They had made up their minds, however, to do things right, so they did not stop until they had done their work in the one way which would insure success.

They filled the fence corners and other nooks with wild primroses and wild heliotrope, and planted beds of woodland ferns in damp, shaded corners of the house and outhouses. And they brought from the woods, also, woodbine and crossvine and trailing arbutus, and planted them to run over the outhouses, for Tom declared that one's back yard ought to be attractive, too.

In two big flower beds in the front yard, which had been left free from grass, they put huge bunches of wild hydrangeas; and Tom promised that he would send from the college some rooted slips of fine roses.

Then Tom outlined the long driveway with palmettoes, and planted clumps of "Spanish bayonets" all about the lot. "Half the world is crazy about palms, Mary Emily," he said, "and our native palmetto and yucca palms are beautiful varieties."



THE WORK DONE WAS WORTH THE EFFORT

It took the three full days of Tom's holiday to accomplish all this work, and even then the two younger boys had to be called in to assist; but Tom said that the work done was worth the effort. You see, the reason it took so much time was that Tom would not plant even so much as a blade of grass without first getting the ground thoroughly prepared for it.

It was not many weeks after Tom went back to college before the signs of his industry began to show all

about the place, for everything that he had planted with so much intelligent care thrived wonderfully. And when he came home to stay in June, a beautifully smooth, green lawn was there to testify to his care in planting, and to Mary Emily's faithfulness in keeping the weeds and the nut grass pulled out. The next year, the place was a perfect picture, and people used to drive miles to see it.

— FRANCES NIMMO GREENE.

HELPS TO STUDY

Word Study.

rick'e ty — weak, shaky.

com bi na'tion — a union formed by uniting one thing with another.

keen — eager.

ap pre'ci ate — to value.

pic tu resque' — forming a pleasing picture.

in sure' — to make sure.

ar'bu tus — a trailing plant of the heath family.

Span'ish bay'o net — a plant of the lily family with rigid, spine-tipped leaves.

yuc'ca — plant of the lily family, having long, pointed, often rigid leaves, and bearing a cluster of white blossoms.

tes'ti fy — to make known, to support the truth of.

Notes and Questions. — When did Tom say farmers would become wealthy? Why was his father not successful? Find out if you can why it is unwise to plant the same crop on a piece of land year after year. What is scrub stock? Tell how the grass was planted. Name the vines and flowers planted. Why did everything that Tom planted thrive? How did the place look the next year?



THE GRAPEVINE SWING

When I was a boy on the old plantation,
Down by the deep bayou,
The fairest spot of all creation,
Under the arching blue ;
When the wind came over the cotton and corn,
To the long slim loop I'd spring,
With brown feet bare, and a hat brim torn,
And swing in the grapevine swing.

Swinging in the grapevine swing,
Laughing where the wild birds sing,
I dream and sigh
For the days gone by,
Swinging in the grapevine swing.

Out — o'er the water lilies, bonnie and bright,
Back to the moss-grown trees ;
I shouted and laughed with a heart as light
As a wild rose tossed by the breeze.
The mocking bird joined in my reckless glee,
I longed for no angel's wing,
I was just as near heaven as I wanted to be,
Swinging in the grapevine swing.

Swinging in the grapevine swing,
Laughing where the wild birds sing —
Oh, to be a boy
With a heart full of joy,
Swinging in the grapevine swing !

I'm weary at noon, I'm weary at night,
I'm fretted and sore of heart,
And care is sowing my locks with white,
As I wend through the fevered mart.
I'm tired of the world, with its pride and pomp,
And fame seems a worthless thing,
I'd barter it all for one day's romp,
And a swing in the grapevine swing.

Swinging in the grapevine swing,
Laughing when the wild birds sing,
I would I were away,
From the world to-day,
Swinging in the grapevine swing.

— SAMUEL MINTURN PECK.

HELPS TO STUDY

Biographical.—Samuel Minturn Peck was born in Tuscaloosa, Alabama, in 1854. He is a graduate of the University of Alabama, and has studied medicine in New York City. He has written many beautiful poems about nature and Southern life.

Word Study.

bay'ou — a sluggish inlet of water.

arching blue — the sky.

bon'nie — Scotch for beautiful.

wend — go, pass.

fe'vered — heated, greatly excited.

mart — a market.

pomp — display, splendor.

bar'ter — trade, exchange.

Notes and Questions. — Where was the old plantation? What grew out on the water? Describe the trees. What time of year was it when the “wind came over cotton and corn”? How does the poet tell you that he was happy? In the fourth stanza, what does the poet wish for? Why is the poet weary? What does he mean by the “fevered mart”? What would he give for “one day's romp and a swing in the grapevine swing”? Express in your own words what the poet means when he says, “care is sowing my locks with white.”



THE CHICKENS WERE BEAUTIES

MARY EMILY'S CHICKENS

One of the things which Mary Emily's brother did for her before he went back to college, was to persuade her to begin raising a fine breed of chickens.

"We want a good breed that will lay early and often," he declared, "and as you yourself once said 'why wait'?"

"Do you suppose I could do it right?" asked Mary Emily a little fearful.

"Of course you can. Any intelligent person can follow directions. Now, I will write down for you, in a little blank book, just what to do, and you have only to do it. I'll fix up the chicken yard and send you some pure bred eggs as soon as I get back to college."

And that is how Mary Emily's chicken raising began. Her mother gave her three good hens. When they started to set, which was early in April, Mary Emily made them good, comfortable nests of straw in clean boxes, and set the boxes in her mother's poultry house,

having first made Jeff whitewash the house inside and out. Under each hen she placed fifteen of the pure bred eggs sent her by Tom. She was careful to keep plenty of fresh water near by, and she would watch for the hens to come off the nests so that she might feed them.

While her hens were sitting, Mary Emily fed them exactly as Tom told her. It took her a long time to remember just what to give them, and from time to time she would have to go back to her book and read the directions: "One pound of corn meal, one-half pound of ground oats, one-half pound of wheat middlings, one-half pound of clover hay, one pound of cracked corn, one-fourth pound of fresh-ground bone meal, and one-eighth pound of meat scrap."

The twins were inclined to laugh at all this care and exactness, but the little girl had promised her brother to follow his directions to the letter, so she did as he told her.

Remembering a warning from Tom, she often examined the hens for lice and mites, and one day, to her distress, she found that one of her hens had mites. Back to her book she went and read: "Take two pounds of plaster of Paris, one-fourth pint of crude carbolic acid, three-fourths pint of gasoline; mix the liquids and work them into the plaster of Paris. When the mixture is dry, dust it over the hens under their feathers." Mary Emily followed this recipe carefully and she had no more trouble from mites.

You may be sure that as time went on the little girl watched the hens very closely, for she was anxious to

see the chickens hatch. One day, about three weeks after she had put the eggs under the hens, Mary Emily discovered a lot of soft, white little fellows under each hen. Soon, all came off — the three hens hatching thirty-nine chicks.

For the first three or four days she fed the newcomers very little food and gave them very little water to drink, exactly as Tom had directed.

After this, for a few days more, she gave them bread crumbs and a little other ground-up food, and put fresh water where they could always get plenty to drink. During all this time, the little girl was careful to obey Tom's strictest warning to keep the henhouse, the feeding vessels, and the vessels for water perfectly clean.



SOFT WHITE LITTLE FELLOWS

After several days, Mary Emily went back to her book again, and read: "When the chickens are a week old, start them on a good ration of the following mixture of food: Wheat, three pounds; corn, three pounds; meat scraps, two pounds; clover hay, two pounds." Mary Emily gave her chickens plenty of this each day, and they grew rapidly. While they were small, and until they were about eight weeks old, she fed them two or three times each day, but after that she found it was not necessary to feed them so often.

The first few weeks were by no means easy. Some of

the chickens were sick and required a great deal of care. A plaintive "peeping" often called Mary Emily to the chicken yard, where she would find a lonesome little chick in search of his mother, or perhaps some complaining fellow who had been crowded out from under his mother's wing, whom she would have to cuddle and comfort a great deal before he would go contentedly to sleep again.

Early in June the chickens, larger and growing feathers rapidly, were taken from the mother and put in runs by themselves. There they strutted around happily, apparently glad to be free. It was about this time that Tom came back from the Agricultural College for the summer.

When he saw those chickens he was perfectly delighted and declared that there never had been anything like them. He said also that he did not mind saying that Mary Emily could beat him at such work.

Their little owner allowed the chickens to roam about the yard and the meadows all summer, and this made them strong and healthy. She now fed them larger grain and some scraps from the kitchen.

When Mary Emily's chickens were five months old they were practically as large, if not as heavy, as the old hen. They were beauties, too, being white with smooth shiny feathers, yellow legs, and brilliant red combs.

This first experience of Mary Emily in chicken raising proved very fascinating. From the time when they toddled around on their tiny, weak legs, to the time when they were able to fly up to the roost, she enjoyed caring

for them. Then, too, she was more than repaid for her trouble by the splendid lot of fine fresh eggs which she got almost every day during the long winter that followed.

HELPS TO STUDY

Word Study.

in tel'li gent — sensible.

rec'i pe — directions.

ra'tion — allowance of food.

plain'tive — mournful, sad.

prac'ti cal ly — in effect, as a matter of fact.

fas'ci na ting — extremely interesting.

Notes and Questions. — What advantage have pure bred chickens over common stock? What preparations were made for the sitting hens? What food was given the hens? What was done to kill the mites? What care was given the little chickens? What was their ration of food? What are some of the causes of the death of young chickens? How can they be avoided? Name the best breed of chickens that you have seen. Describe what you saw at some poultry show.



THAT CALF

An old farmer, one morn, hurried out to his barn,
Where the cattle were standing, and said,
While they trembled with fright, "Now which of you,
last night,
Shut the barn door while I was in bed?"
Each one of them half shook his head.

Now the little calf, Spot, she was down in the lot,
And the way the rest did was a shame ;
For not one, night before, saw her close up the door,
But they said that she did, all the same ;
For they always made her bear the blame.

Said the horse, Dapple-gray, "I was not up this way
Last night, as I now recollect ;"
And the bull, passing by, tossed his horns very high,
And said, "Where's the one to object,
If I say 't is that calf I suspect?"

“It is too wicked, now,” said the old brindle cow,
 “To accuse honest folks of such tricks.”
 Said the cock in the tree, “I am sure ’t wasn’t me;”
 All the sheep just said, “Bah!” — there were six;
 And they thought, now that calf’s in a fix!

“Of course we all knew ’t was the wrong thing to do,”
 Cried the chickens; “Of course,” mewed the cat;
 “I suppose,” said the mule, “some folks think me a fool,
 But I’m not quite so simple as that, —
 Well, that calf never knows what she’s at!”

Just then the poor calf, who was always the laugh
 And the jest of the yard, came in sight.
 “Did you shut my barn door?” said the farmer once
 more;
 And she answered, “I did, sir, last night;
 For I thought that to close it was right.”

Now each beast shook his head: “She will catch it,”
 they said;
 “Serve her right, for her meddlesome way.”
 Cried the farmer: “Come here, little bossy, my dear,
 You have done what I cannot repay,
 And your fortune is made from to-day.

“Very strangely, last night, I forgot the door quite
 And if you had not closed it so neat,
 All the colts had slipped in, and gone straight to the bin,
 And got what they ought not to eat, —
 They’d have foundered themselves upon wheat.”

Then each beast of them all began loudly to bawl,
The mule tried to smile, the cock to crow ;
" Little Spotty, my dear, you're the favorite here,"
They all cried ; " we're so glad it was you !"
But that calf only answered them, " Boo !"

— ALICE CARY.

HELPS TO STUDY

Biographical. — Alice Cary was a popular writer of prose and poetry. She was born in Ohio but spent much of her life in New York. Her poems and those of her sister Phoebe have given both of them a high place in American literature. The two sisters, Alice and Phoebe, lived together. Phoebe wrote many poems, among them " I am Nearer My Home To-day." Read it.

Word Study.

suspect' — to imagine to be guilty without proof.

jest — an object of ridicule.

med'dle some — given to busying one's self with the affairs of others.

bin — a crib.

foun'der — to make lame or sick, by overeating.

Notes and Questions. — Why do you think the barnyard animals chose the calf to fix the blame upon? What did the others mean by saying " she will catch it " ? Was the calf tempted to tell a lie? Have you ever seen boys and girls act the way the farmyard animals did? What usually happens to those who try to get some one else into trouble? Why was the farmer so grateful? Find out how you cure animals that are foundered.



BILLY'S PIGS

I was thinking of Tom and Mary Emily, and of their model farm as my friend told me she saw it, the other day. It seems that this friend of mine wanted some suggestions on raising pigs, and was told to go to "headquarters." She learned afterward that "headquarters" was the nickname given by the neighbors to Tom's model farm, because it was the place to which they had all gone for directions that could be relied upon.

My friend told me that never in all her life had she seen anything quite so pleasing as the sight of that home and its surroundings. The house, as well as every out-house on the place, was snowy white. The yard was a stretch of green velvet, and all about the place were masses of flowers and blooming vines. It was gorgeous

everywhere, she said, back and front, with a riot of bloom ; and everywhere it was exquisitely clean.

The stock was what interested her most, so she walked through the well-kept poultry yard with only a passing glance at the hundreds of magnificent pure-bred chickens, to the pigsties beyond.

Here, she said, she found an interesting young fellow called Billy, who took great pride in showing his pigs.

"To begin with, you must get a good breed," said the young fellow. "My brother will not have any but good stock on the farm. Come and see their houses," he continued. "The floors are good, you see, to keep out draughts. The straw in them is clean, and the pens are kept as clean as possible."

"Why are your pens so long and narrow?" asked my friend.

"Young pigs need exercise," replied Billy, "and this style of pen gives them a chance for long strolls." The boy laughed a little, and continued, "Clean pens, plenty of food, and plenty of exercise are good general rules to remember, but there are a few suggestions about young pigs which will help you."

Billy then showed the lady how the main pen was divided into two compartments, the little baby pigs being separated from the mother by a partition, the slats of which were far enough apart for them to visit their mother as often as they wished to do so. At night, the boy explained, the little fellows snuggled around the mother for comfort and protection.

"Their troughs are side by side, you see, although on opposite sides of the partition. This makes it possible

to give the little pigs the food they need; and, being near their mother while she is feeding, they early learn to eat for themselves."

"But is it such an advantage for them to eat early?" asked the lady.

"Certainly, madam," replied the young stock raiser, "pigs that are early trained to get their food independently are worth as much at six weeks old as ordinary fed pigs are at eight weeks. That is a saving of two weeks."

"When and what do you feed them?" asked the lady.

"I begin to feed them when they are a week old, if they will take it," said the boy; "sweet milk at first, and not any more poured into the trough than they will eat. It is not a good plan to have food left in the trough to sour. After the pigs have become accustomed to milk, a small amount of wheat shorts is kept in another trough, and to this I gradually add a few grains of corn. It is most important while the pigs are still nursing to feed the mother heavily on a variety of good foods."

"Do you keep the young pigs penned up all the time?" the visitor inquired.

"No, indeed," said the boy. "Just as soon as these youngsters can enjoy a run in the alfalfa pasture, I am going to turn them in every day for a few hours. The added exercise and the sunshine and freedom will be as good for them as the grazing."

As Billy and his visitor made their way back to the front gate, the boy said pleasantly, "You must come around some evening late and see Jeff's dairy and cows. I think he has the finest in the state."

"A dairy, too?" said the lady in surprise. "Why,

I believe you people have everything on this place, and we always thought it so very small."

"Only one hundred acres, madam," laughed the boy, "but my brother Tom says that he would rather have one acre that would do its whole duty than ten that would only half pay."

The lady was in her carriage now, and had gathered up the reins; extending her hand in good-by she said, "You have been so helpful to me."

"Come again and let us help you whenever we can," he replied heartily. "Some night you must take supper with us. Janie and Sue have studied domestic science and they are the best cooks in the country."

HELPS TO STUDY

Word Study.

mod'el — suitable to be taken as a pattern.

gor'geous — splendid.

ri'ot — excess, luxuriance.

ex'qui site ly — extremely.

par ti'tion — that which separates one part from another.

graz'ing — feeding on grass.

va ri'e ty — different kinds.

do mes'tic sci'ence — the science of household management.

Notes and Questions. — What effect had Tom's Agricultural College training on his farming? What did Tom think about good stock on a farm? Describe Billy's pig pens. Describe the way he fed the pigs. Do pigs thrive in clean pens or in dirty ones? How large was Tom's farm, and what did he say about one acre? What was the difference in the way Billy treated his pigs from the way they are ordinarily treated?

THE BAREFOOT BOY

Blessings on thee, little man,
Barefoot boy, with cheek of tan!
With thy turned-up pantaloons,
And thy merry whistled tunes;
With thy red lip, redder still
Kissed by strawberries on the hill;
With the sunshine on thy face,
Through thy torn brim's jaunty grace;
From my heart I give thee joy, —
I was once a barefoot boy!
Prince thou art, — the grown-up man
Only is republican.
Let the million-dollared ride!
Barefoot, trudging at his side,
Thou hast more than he can buy
In the reach of ear and eye, —
Outward sunshine, inward joy:
Blessings on thee, barefoot boy!

Oh for boyhood's painless play,
Sleep that wakes in laughing day,
Health that mocks the doctor's rules,
Knowledge never learned of schools,
Of the wild bee's morning chase,
Of the wild-flower's time and place,
Flight of fowl and habitude
Of the tenants of the wood;
How the tortoise bears his shell,
How the woodchuck digs his cell,
And the ground-mole sinks his well;



Sully

THE BOY WITH THE TORN HAT

How the robin feeds her young,
How the oriole's nest is hung ;
Where the whitest lilies blow,
Where the freshest berries grow,
Where the ground-nut trails its vine,
Where the wood-grape's clusters shine ;
Of the black wasp's cunning way,
Mason of his walls of clay,
And the architectural plans
Of gray hornet artisans !
For, eschewing books and tasks,
Nature answers all he asks ;
Hand in hand with her he walks,
Face to face with her he talks,
Part and parcel of her joy, —
Blessings on the barefoot boy !

Oh for boyhood's time of June,
Crowding years in one brief moon,
When all things I heard or saw,
Me, their master, waited for.
I was rich in flowers and trees,
Humming-birds and honey bees ;
For my sport the squirrel played,
Plied the snouted mole his spade ;
For my taste the blackberry cone
Purpled over hedge and stone ;
Laughed the brook for my delight
Through the day and through the night,
Whispering at the garden wall,
Talked with me from fall to fall ;

Mine the sand-rimmed pickerel pond,
Mine the walnut slopes beyond,
Mine, on bending orchard trees,
Apples of Hesperides!
Still as my horizon grew,
Larger grew my riches too;
All the world I saw or knew
Seemed a complex Chinese toy,
Fashioned for a barefoot boy!

Oh for festal dainties spread,
Like my bowl of milk and bread;
Pewter spoon and bowl of wood,
On the door-stone, gray and rude!
O'er me, like a regal tent,
Cloudy-ribbed, the sunset bent,
Purple-curtained, fringed with gold,
Looped in many a wind-swung fold;
While for music came the play
Of the pied frogs' orchestra;
And, to light the noisy choir,
Lit the fly his lamp of fire.
I was monarch: pomp and joy
Waited on the barefoot boy!

Cheerily, then, my little man,
Live and laugh, as boyhood can!
Though the flinty slopes be hard,
Stubble-speared the new-mown sward,
Every morn shall lead thee through
Fresh baptisms of the dew;

Every evening from thy feet
 Shall the cool wind kiss the heat :
 All too soon these feet must hide
 In the prison cells of pride,
 Lose the freedom of the sod,
 Like a colt's for work be shod,
 Made to tread the mills of toil,
 Up and down in ceaseless moil :
 Happy if their track be found
 Never on forbidden ground ;
 Happy if they sink not in
 Quick and treacherous sands of sin.
 Ah ! that thou couldst know thy joy,
 Ere it passes, barefoot boy !

— JOHN GREENLEAF WHITTIER.

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HELPS TO STUDY

Biographical.—John Greenleaf Whittier (1807–1892) was one of America's favorite poets. He spent his early life on a farm, and learned the trade of a shoemaker. When he became a poet and writer he took great interest in the antislavery movement and wrote many stirring poems in favor of abolishing slavery.

Word Study.

jaun'ty — airy, gay.

treach'er ous — deceiving.

re pub'li can — one who favors or supports a republic.

hab'i tude — habit, custom, way.

ten'ant — dweller, inhabitant.

ar chi tec'tu ral — relating to building.

ar'ti san — one skilled in any art or trade, worker.

es chew'ing — shunning, avoiding.

moon — a month's time.

pick'er el — a kind of fish.

Apples of Hes per'i des — golden apples of an old fable guarded by the daughters of Hesperus.

ho ri'zon — the place where earth and sky seem to meet, thus the boundary lines of one's experience.

com plex' — made of many parts, perplexing. .

re'gal — royal.

pied — spotted, many colored.

or'ches tra — a band of musicians.

moil — toil, drudgery.

Notes and Questions. — Describe the barefoot boy from the words of the first stanza. Why is he called a prince? What is meant by "the grown-up man only is republican"? What has the boy that money cannot buy? For what does the poet wish in the second stanza? What does the boy know that was "not learned at school"? Why is the wasp called "a mason"? Why are hornets said to have "architectural plans"? Which does the poet say is the happiest month for boys? Why? What is the "snouted mole's spade"? Give a description of the boy as he sat at his doorstone eating his milk and bread. In the fifth stanza what advice does the poet give the boy? What are "prison cells of pride"? What is meant by "treading the mills of toil"?

LEARNING BY OBSERVING

The great use of a school education is not so much to teach you things, as to teach you how to learn, — to give you the noble art of learning, which you can use for yourselves in after life on any matter to which you choose to turn your mind. And what does the art of learning consist in? First and foremost, in the art of observing. That is, the boy who uses his eyes best on his book, and *observes* the words and letters of his lesson most accurately and carefully, is the boy who learns his lesson best.

You know as well as I how one boy will sit staring at his book for an hour, without knowing a word about it while another will learn the same lesson in a quarter of an hour; and why? Because one has actually *not seen* the words. He has been thinking of something else, looking out of the window, repeating the words to himself like a parrot. The other has simply, as we say, “looked sharp.” He has looked at the lesson with his whole mind, seen it, and seen into it, and therefore knows all about it.

Therefore, I say that everything which helps a boy’s power of observation helps his power of learning; and I know from experience that nothing helps that so much as the study of the world about us, and especially of natural history: to be accustomed to watch for curious objects; to know in a moment when you have come upon anything new, — which is observation; to be quick at

seeing when things are like and when unlike, — which is classification. All that must, and I well know does, help to make a boy shrewd, earnest, accurate, and ready for whatever may happen.

When we were little and good, a long time ago, we used to have a jolly old book, called "Evenings at Home," in which was a great story, called "Eyes and No Eyes"; and that story was of more use to me than any dozen other stories I have ever read.

A regular old-fashioned story it is, but a right good one, and thus it begins:—

"Well, Robert, where have you been walking this afternoon?" said Mr. Andrews, to one of his pupils, at the close of a holiday. Oh, Robert had been to Broom Heath, and round to Campmount, and home through the meadows. But it was very dull; he hardly saw a single person. He would rather by far have gone by the turn-pike road.

"But where is William?"

Oh, William started with him, but he was so tedious, always stopping to look at this thing and that, that Robert would rather walk alone, and so went on.

Presently in comes Master William, dressed, no doubt, as we wretched boys used to be forty years ago, — in frill collar, tight skeleton monkey jacket, with tight trousers buttoned over it, and a pair of low shoes which always came off if one stepped into heavy ground; and terribly dirty and wet he is, but he never had such a pleasant walk in his life, and he has brought home a handkerchief full of curiosities.

He has a piece of mistletoe, and wants to know what

it is. He has seen a woodpecker and a wheat ear and has plucked strange flowers off the heath, and has hunted a pewit, because he thought its wing was broken till, of course, it led him into a bog, and wet he got; but he did not mind, for in the bog he fell in with an old man cutting turf, who told him all about turf cutting; and then he went up a hill, and saw a grand prospect, and because the place was called Campmount, he looked for a Roman camp, and found the ruins of one; and then he went on and saw twenty things more; and so on, and so on, until he had brought home curiosities enough and thoughts enough to last him a week.

Mr. Andrews, who seems a sensible old gentleman, tells him all about his curiosities; and then it turns out that Master William has been over exactly the same ground as Master Robert, who saw nothing at all.

Whereon says Mr. Andrews, wisely enough, in his solemn, old-fashioned way: "So it is: one man walks through the world with his eyes open, and another with them shut; and upon this depends all the superiority of knowledge which one acquires over the other. I have known sailors who had been in all quarters of the world, and could tell you nothing but the signs of the tippling-houses, and the price and quality of the liquor. On the other hand, Franklin could not cross the Channel without making observations useful to mankind.

"While many a vacant, thoughtless person is whirled through Europe without gaining a single idea worth crossing the street for, the observing eye and inquiring mind find matter of improvement and delight in every ramble. Do you, then, William, continue to make use

of your eyes; and you, Robert, learn that eyes were given you to use."

And when I read that story, as a little boy, I said to myself, I *will* be Mr. Eyes; I will *not* be Mr. No Eyes; and Mr. Eyes I have tried to be ever since; and Mr. Eyes I advise you to be, if you wish to be happy and successful.

Ah! my dear boys, if you knew the idle, vacant, useless life which many young men lead when their day's work is done, continually tempted to sin and shame and ruin by their own idleness, while they miss opportunities of making valuable discoveries, of distinguishing themselves and helping themselves forward in life; then you would make it a duty to get a habit of observing, and of having some healthy and rational pursuit with which to fill up your leisure hours.

— CHARLES KINGSLEY.

HELPS TO STUDY

Biographical.— In a little village in the south of England Charles Kingsley was born, in 1819. His father was a minister and he grew up surrounded by books. He was fond of reading and tramping over the meadows and along the beach. He loved nature and made friends of the animals and flowers.

He became a minister but spent much of his time studying animals, plants, and rocks. He used to say that he could see God in them all.

Word Study.

ac'cu rate — exact, correct.

shrewd — sharp-witted.

te'di ous — tiresome.

heath — a cheerless tract of land.

pe'wit — the European black-headed gull, a pewee.

turf — the grassy surface of untilled land, peat when prepared for fuel.

su pe ri or'i ty — advantage.

Franklin — Benjamin Franklin.

ra'tion al — reasonable, sensible.

Notes and Questions. — Of what does the art of learning consist? What is observation? What is classification? Tell the story of "Eyes and No Eyes." How did this story influence Charles Kingsley's life? What advice does he give to boys? What is a turnpike road?

To the Teacher. — Before school or at recess put a collection of miscellaneous objects on a table or teacher's desk; cover this with a cloth; assemble the class around the table and lift the cloth for just a minute while the pupils observe carefully without making notes. Replace the cloth and see who can list the most objects. Without warning, some day see who can make the longest list of things seen on the way to school.

FLOWER IN THE CRANNIED WALL

Flower in the crannied wall,
I pluck you out of the crannies:—
Hold you here, root and all, in my hand,
Little flower, but if I could understand,
What you are, root and all, and all in all,
I should know what God and man is.

— ALFRED TENNYSON.



A SONG

There is ever a song somewhere, my dear ;
There is ever a something sings always :
There's the song of the lark when the skies are clear,
And the song of the thrush when the skies are gray.
The sunshine showers across the grain,
And the bluebird trills in the orchard tree ;
And in and out, when the eaves drip rain,
The swallows are twittering ceaselessly.
There is ever a song somewhere, my dear,
Be the skies above or dark or fair,
There is ever a song that our hearts may hear —
There is ever a song somewhere, my dear —
There is ever a song somewhere !

There is ever a song somewhere, my dear,
In the midnight black or the mid-day blue:
The robin pipes when the sun is here,
And the cricket chirrups the whole night through.
The buds may blow and the fruit may grow,
And the autumn leaves drop crisp and sear;
But whether the sun, or the rain, or the snow,
There is ever a song somewhere, my dear.

— JAMES WHITCOMB RILEY.

From the Complete Works of James Whitcomb Riley, Copyright 1913, by special permission of the publishers, The Bobbs-Merrill Company.

HELPS TO STUDY

Biographical. — James Whitcomb Riley, born in Indiana in 1853, is known as “The Hoosier Poet.” He was always fond of country life, and spent his holidays wandering through the woods and splashing in the creeks.

Word Study.

trills — songs in wavering notes.

pipes — sings as through a pipe, flute.

chir’rups — chirps.

sear — brown, dried.

Notes and Questions. — Name the birds mentioned in the first stanza. Describe the color and habits of each. What lesson can we learn from these birds? What is meant by “a song that our hearts may hear”? What is the meaning of the last stanza?

THE FLOWER

“This little flower that loves the lea,
May well my simple emblem be;
It drinks heaven’s dew as blithe as rose
That in the king’s own garden grows.”

Did you ever see a flower? Do not be surprised, now, for there are thousands and thousands of people who have never *really* seen a flower.

And do not answer my question too quickly. You are getting ready to say that you have seen flowers by the handful, by the lapful, by the yardful, when the chances are that you have never seen a single blossom in all your life.



DID YOU EVER REALLY
SEE A FLOWER?

What do I mean? Why, simply this: There is a great deal more to any flower than can be seen by merely holding it in one’s hands for a few seconds and staring it out of countenance. There are hidden wonders in every blossom that unfolds, yet these wonders are not so deeply hidden but that we may find them quickly and easily if we try.

Let us take a flower that we think we know very well — the cotton bloom — and *see* it perhaps for the first time in our lives. The first good, wide-awake look we take at it shows us that it is made up of several different parts. On the outside, and forming a kind of cup to

hold and protect the rest of the flower, is a green covering which is called the "calyx." The small divisions or parts of the calyx are called "sepals."

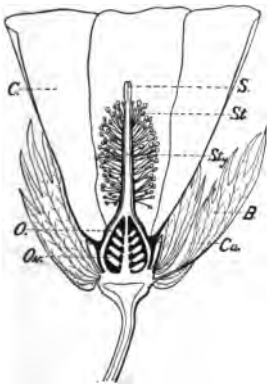
Just inside the calyx is the creamy white "corolla." This is showy and pretty, and by its beauty attracts bees and



THE COTTON BLOOM

other insects. The visits of these insects are very important to some flowers, as you will learn later. The separate parts of the corolla are called "petals."

Inside the corolla will be found a number of small stalks with enlarged club-like heads. These are the "stamens." If you will take a pin and open the club-like end of one of the stamens you will find it full of a yellow powder which is known as "pollen." Did you ever notice, in the spring, collections of yellow looking powder on small pools of water? Sometimes you can see some of it in the air. Frequently after a rain you can see it left in little drifts where the water has run. This is pollen.



In the center of the flower is a stalk-like part called the "pistil." The outer end of the pistil, or the "stigma," is spread out to catch the pollen, while the enlarged

base of it contains the ovules or undeveloped seeds. The development of the ovule makes the seed.

By observing the flower from day to day, you will find that the pistil gradually enlarges, the corolla turns red, dries up, and usually drops to the ground, and the stamens disappear. You will also observe that the calyx may remain green until the cotton boll is nearly or quite mature.

If you have followed this lesson with a cotton bloom in your hand, you have really *seen* a flower. Make friends with the other flowers about you and find their hidden wonders.

HELPS TO STUDY

Word Study.

lea — meadow.

em'blem — sign, token, an object that stands for something else.

blithe — gay, joyous.

staring out of countenance — looking very hard.

ma ture' — full grown.

Notes and Questions. — Name the parts of a flower. Bring some flower, as the cotton bloom, to the schoolroom and study the various parts. Dissect the flower until each part is seen and studied and you are thoroughly familiar with their names.

THE SECRETS OF FLOWERS

Flowers have their secrets, as well as insects. Shrewd little traders they are, too, understanding well what is for their advantage.

They welcome the honey-gathering insects; they flaunt the gayest of banners; they don the most brilliant dresses; they breathe sweet messages of invitation; they pose in the most coquettish attitudes, drooping their heads with such charming modesty, or smiling with such sunny frankness, that the insects cannot help understanding that they want to be friends with them. What is the meaning of all this coquetting?

To understand this well, we must know a few facts about plant life.

The golden grains of pollen which flowers produce must fall upon the sticky stigma, must pierce its tissue, and glide down the slender tube of the style into the ovary, where, entering the tiny ovules or unfertilized seeds, they will make them fertile; that is, able to produce new plants when they ripen and fall to the ground.

But a plant can produce stronger and healthier seeds if it is fertilized by the pollen of another plant of the same kind, rather than by its own pollen.

You know plants cannot go about on their own errands; they must remain quiet in one place, working busily to change mineral matter — air, earth, and water — into plant matter for the use of animals; for animals, with all their superiority, cannot use mineral matter for food, but must depend on plants to do that for them.

So the plant, if it wishes to have strong seeds, must call to its aid its friends, the wind and the insects.

You have noticed that over the tassel-like flowers of willows, poplars, and oaks, so plentifully sprinkled with pollen, insects do not hover; neither bright color nor fragrance is present to tempt them. The friendly wind, however, less particular about gay color and sweet odor, generously sways the branches of these trees, and so wafts the pollen from one to another.

But in most flowers, hidden away in some gland or spur within the flower-cup, is a tiny drop of honey designed to tempt insects. Now an insect, to get the honey, must first brush past the anthers, in doing which it usually rubs off some of their pollen.

As the insect always prefers to go from one flower to another of the same kind, that it may get the same sort of honey, if it can only leave the first flower without touching the stigma, it will, on entering the second one, be apt to lodge this pollen on its stigma, thus causing the flower to make stronger seeds than it otherwise would.

As the honeydrop, therefore, is so valuable to the flower, we shall not be surprised to find that it tries to guard it from all harm. While the flower is growing, Nature wraps the green calyx close about it, overlapping its sepals, and often folding the petals alternately in and out, that no insect may get in till the stamens, pistils, and the precious honeydrop are all formed. And then she has all sorts of devices to protect the honeydrop.

The daisy, on the approach of rain, shuts its fringes tightly over its little yellow florets, that the rain may not enter and spoil the honey; at night it does the same,

because the insects adapted to enter and rob it of its honey without touching the anthers fly in the night, while those adapted to brush off its pollen in their search for sweets, fly in the daytime.

The evening primrose opens its flowers just as the daisy closes its eyes, and breathes forth such a sweet perfume that the evening moths, whose structure is suited to this flower, are not long in finding this out and in paying their compliments.

The lily of the valley and other bell-shaped flowers droop their heads to protect the honey from storms.

The stems of other flowers are beset with thorns and bristles or coated with a gummy matter which entraps creeping insects, as the ants, which would gladly get honey, but whose bodies are too short to reach the pollen while they are sucking the honey.

Still more quaint are the devices of some of our flowers for getting their pollen from other plants instead of using their own. We will notice three of these.

You have all gathered the pretty wild geranium, and perhaps you remember that this flower has five purple petals, ten stamens, and one pistil, which, when ripe, shows a five-cleft stigma.

Around this pistil is a cluster of silken hairs, whose use is to point to, as well as to protect, the honey bags at the base of the stamens, toward which all the veining of the petals also points.

When the flower opens, all of the ten stamens lie upon the corolla, so that no bee could get the honey; but soon five rise and cling to the pistil, permitting the bee to reach some of the honey bags, in doing which it brushes

off the pollen from the raised stamens. A little later, these fall, and the other five rise, enabling the bee to suck the remainder of the honey, and compelling it to brush off the remainder of the pollen. At last, when all the pollen is gone, and it is impossible to use any of it in this flower, the stigma opens; and when the next bee enters the flower, seeking honey, it brushes pollen from a younger and more vigorous flower upon the stigma of this one.

The wild violet also has a shrewd way of making the bee pay for all it gets. One of the petals of this modest, drooping flower has a spur, in the tip of which, as well as in the bases of the two stamens inclosed within it, the honey is concealed.

The orange-colored anthers, closing tight about the stigma, which protrudes a little way beyond them, form a little box into which the dry pollen dust falls, so that if this ring of anthers were parted, the pollen would fall out of its box upon the stigma. Now if a bee approaches the violet, guided by the veins and markings, which all point to the spur, it lights upon the stigma, shakes the slender style, parts the anthers, and receives a shower of golden pollen dust, which, after gathering the honey with its long tongue, it carries to another violet, brushing it right against the stigma.

And now let us look in the garden some day in September for the brilliant salvia, or scarlet sage. Its corolla is two-lipped, like that of the snapdragon. It has two strange stamens, in each of which a short filament supports on its top a swinging bar with a pollen bag at one end. The bee must pass between two such

swaying anthers to reach the honey. In doing this, it knocks the anther from a nearly vertical to a horizontal position, receiving a shower of pollen on its back which, as the bee withdraws, does not hit the undeveloped overhanging pistil.

But when, in search of honey, this bee enters an older flower whose full-grown pistil now bends down low, it cannot fail to brush some pollen against the stigma. Is not the salvia an ingenious flower?

Shall we not prize our flowers all the more now that we know that their forms, colors, and fragrance have a purpose?

Geologists tell us that the first flowers which the earth produced had no bright colors or fragrance, for there were then no insects to visit. But gradually, as the insect world appeared, flowers put on their gay dresses and their charming manners to welcome them, so that each might be helped.

Do the flowers or the insects reason about it? Do they know that a great poet has said, "We are born to do benefits"? No, they unconsciously obey a law of nature. The flower, instead of using all its forces for itself, stores away a little drop of sweetness for another, and in so doing gains strength and health.

But the law is for us, too. If we would become strong and useful, we must not think and work wholly for ourselves, but must lay up some drop of sweetness for others, sure that when it is sought we shall receive good in return.

The plant, however, does not know what it does; we may choose to do what it does unconsciously. And

so the great German poet, Friedrich Schiller, has given us these beautiful words: —

“Seek'st thou the highest, the greatest?
 In that the plant can instruct thee.
 What it unwittingly is, be thou
 Of thine own free will.”

Shall we not, then, “of our own free will,” like the plants, try to become mutual helpers?

— RETTA A. HOYLES.

HELPS TO STUDY

Word Study.

flaunt — to display boastfully.

don — put on.

coquet'tish — like a flirt.

de sign'ed — planned.

flo'ret — a small flower.

gland — an organ especially designed to hold a liquid.

spur — a hollow projection from some part of a flower.

de vi'ces — schemes.

pro trudes' — projects.

fil'a ment — a thread or threadlike structure.

ver'ti cal — standing upright.

hor i zon'tal — flat, level.

in gen'ious — clever, shrewd.

ge ol'o gist — one who makes a study of the earth and its life.

ben'e fit — an act of kindness.

mu'tu al — common, joint.

un wit'ting ly — unknowingly.

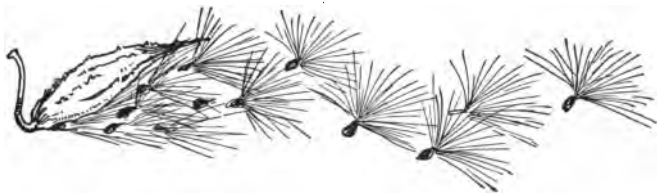
Notes and Questions. — How do plants show insects that they want to be friends with them? Tell how plants are made fertile. Name two friends who help the plants to make strong seeds. How do they help? What is hidden in most flowers' cups? Why does the bee go from one flower to another of the same kind? How does the bee benefit the flowers visited? Tell how the daisy protects its honeydrops from rain. How do you account for the fact that the daisy closes its petals at night and the evening primrose closes its petals in the morning? Mention peculiarities of other flowers. What lessons can we learn from plants?

THE BEE AND THE FLOWER

The bee buzz'd up in the heat:
"I am faint for your honey, my sweet."
The flower said, "Take it, my dear,
For now is the spring of the year;
So come, come!"
"Hum!"
And the bee buzz'd down from the heat.

And the bee buzz'd up in the cold
When the flower was wither'd and old:
"Have you still any honey, my dear?"
She said, "It's the fall of the year,
But come, come!"
"Hum!"
And the bee buzz'd off in the cold.

— ALFRED, LORD TENNYSON.



SEPTEMBER

The golden-rod is yellow ;
The corn is turning brown ;
The trees in apple orchards
With fruit are bending down.

The gentian's bluest fringes
Are curling in the sun ;
In dusky pods the milkweed
Its hidden silk has spun.

The sedges flaunt their harvest
In every meadow-nook ;
And asters by the brookside
Make asters in the brook.

From dewy lanes at morning
The grapes' sweet odors rise ;
At noon the roads all flutter
With yellow butterflies.

By all these lovely tokens
 September days are here,
 With summer's best of weather,
 And autumn's best of cheer.

— HELEN HUNT JACKSON.

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HELPS TO STUDY

Biographical.—Helen Hunt Jackson (1831–1885), who wrote under the pen name of “H. H.,” was a native of Massachusetts. Many years of her life were spent in the West, where she did much to help the Indians. Her novel “Ramona” is a beautiful Indian story. It was she who named “The Garden of the Gods” in Colorado. Her burial place is above the beautiful Cheyenne Falls which she had loved so much in life.

Word Study.

gen'tian — a plant with blue flowers.

sed'ges — plants resembling a coarse grass which grow in swampy places.

faunt — display.

to'ken — emblem, sign.

Notes and Questions.—What are the tokens or signs that September has come? Have you ever seen the fringed gentian? Describe it. Describe the habits of the milkweed. What is its “hidden silk”? What is meant by the “sedges flaunt their harvest”? How can “asters by the brookside make asters in the brook”? Why is September such a glorious month?

CERES MOURNING FOR HER DAUGHTER

I

In olden times, when people believed in gods and goddesses, there was one whom they called Ceres. The goddess Ceres had the care of the crops and the harvests over all the earth. She was, therefore, the goddess of agriculture.

Ceres had one very beautiful daughter, whose name was Proserpina. The goddess was so fond of her child that she seldom let her go into the fields alone.

One morning Ceres said, "My child, the season is very backward. I must go far away to-day to attend to the growing grain. While I am away you may go to the seashore to play with the sea nymphs, but do not wander far away into the fields." Donning her turban of scarlet poppies, and kissing her daughter good-by, Ceres stepped into her car drawn by winged dragons.

Proserpina watched her mother as she swiftly rode away. Then, singing a merry song, she hastened to the seashore. At the sound of the maiden's voice the sea nymphs rose from the water, shaking the sparkling drops from their sea-green ringlets. They brought beautiful shells of many colors from the ocean bed. These they made into a necklace for Proserpina.

II

Wishing now to gather flowers to make wreaths for her playmates, she asked them to go with her into the fields. But the sea sprites did not dare to leave the

water. They promised to rest on a soft bed of sponge till the little girl should return.

Proserpina ran quickly to the place where only the day before she had, with her mother, picked a beautiful bouquet. This day the flowers seemed wilted, so she wandered farther and farther into the fields. She filled her apron with the choicest blossoms that she could find — fragrant pinks and violets, blushing roses, and hyacinths.

As she was about to return to the seashore, she beheld a short distance from her a large shrub covered with the most beautiful flowers that she had ever seen. She had only a moment before looked at that very spot, but no shrub was then in sight. Yet there it was.

Proserpina started toward it, though she felt half afraid to touch it. Finally, laughing at her fears, she plucked some of the blossoms for her wreaths.

Admiring its beautiful foliage, she decided to take the plant home. She pulled and pulled, and at last she tore it from the earth, leaving a large hole in the ground, which seemed to grow wider and deeper.

Suddenly four jet-black horses darted through the opening, drawing a golden chariot, in which sat a man with a crown on his head. His garments were covered with diamonds, which glistened in the sun. The man's face was dark and gloomy. Proserpina, too much frightened to run, screamed for her mother.

The man tried to quiet her. He told her that his name was Pluto — that he was king of the world beneath.

“Do not be afraid of me,” he said. “I will not harm you. Will you ride with me in my chariot of gold? I

*Rembrandt*

PLUTO SEIZED HER

will show you my home. All the gold and silver that lie in the earth, the copper fields, and the coal mines belong to me. You shall have diamonds for playthings.”

But Proserpina still cried for her mother. Pluto seized her and placed her by his side in the chariot.

He then pulled the reins and told the horses to go. So fast did they go that it seemed to Proserpina as if they were flying through air. In a moment they were out of sight of the maiden's home.

III

In their journey they passed a field in which Ceres, half hidden by the waving corn, was at work. Proserpina cried aloud, but her mother saw her not.

In a short time the road grew rough; there were great rocks on either side; now the way seemed more dismal than ever.

At last they reached King Pluto's palace, which was made of gold with windows of crystal. The palace was lighted with lamps of diamonds and precious stones of many colors. Yet how dismal it seemed to the child!

"Oh, King Pluto!" she cried, "take me back to my mother! I cannot remain here!"

In vain Pluto tempted her with every dainty dish his cook could prepare. Proserpina would eat nothing, knowing if she did that she could not return to the upper world.

When Pluto's chariot rushed past the field in which Ceres was, the goddess was so busy that she did not see it. However, she heard Proserpina's screams. She at once stepped into her chariot and hastened home. Finding the house deserted, she went to the seashore. There she found the sea nymphs waiting for the maiden's return.

Ceres was much frightened at the story of the sea nymphs. Lighting a torch, for it was now night, she started out to find her child.

Nine days and nights she wandered about, so changed in looks that no one knew her. Neither gods nor men could tell her anything about the lost child.

Finally she visited the sun god, who saw everything. He, after thinking a moment, told Ceres that Pluto ten days ago had carried Proserpina to the lower world, to be his queen.

Ceres now gave up all hopes of seeing her daughter again. She resolved that nothing should grow on the face of the earth until her daughter was restored to her.

So all things—grass, grain, and flowers—withered. The earth grew more and more dismal.

IV

Ceres, continuing her wandering, came one day to a palace in which a little prince lay sick. The king and queen begged her to care for the child. Ceres took the boy in her arms. She cared for him night and day, and soon the prince became strong and healthy.

She still remained in the king's palace. At last Jupiter, pitying the people because the earth yielded no fruit, sent Mercury to urge Pluto to let Proserpina return to her mother.

Just before Mercury entered the palace, King Pluto's servant had given Proserpina a pomegranate which he found in the upper world.

It was so withered and dry that the maiden refused to touch it. But the servant said it was the only one he could find. When Proserpina was alone, she thought she would take the pomegranate in her hand. As she did so she became hungry, and was biting it as Pluto and Mercury entered the room. She returned the fruit to the plate, but some of the seeds were left in her mouth.

Pluto now told her how much she was missed in the upper world. He said that he should be lonely without her, but that it was not right to keep her any longer. Proserpina was very glad to go, yet sorry to leave Pluto alone. Mercury hurried her away, fearing Pluto would change his mind.

Ceres was sitting on the doorstep when suddenly her torch went out. Very much surprised, she looked up and saw grass and flowers springing up about her. Before she could speak Proserpina was in her arms. Mother and daughter shed many tears of joy.

After a time Ceres asked her daughter if she had eaten anything while in King Pluto's palace.

Then Proserpina told her mother the whole story.

It grieved Ceres because Proserpina had eaten the pomegranate seeds. For, said she, "My daughter is only in part restored to me. For each pomegranate seed she must spend one month of every year in King Pluto's palace."

But Proserpina comforted her mother by saying that she should be very glad to make King Pluto happy, if she could spend a part of the time with her dear mother.

This story of Ceres tells us how people in olden times studied Nature. It describes the changes of summer and winter. The sorrow of Ceres was the gloom which fell upon the earth during the cheerless months of winter. The outburst of spring was the return of Proserpina in all her radiant beauty. The time which Proserpina must spend in Pluto's palace of darkness represented that portion of the year in which the germ of the seed lies dormant.

HELPS TO STUDY**Word Study.**

Ce' res — the goddess of the harvest.

nymph — a young goddess.

sprite — a fairy.

hy'a cinth — a flowering plant.

fo'li age — the leaves of a plant.

char'i ot — a two-wheeled car for racing.

Plu'to — god of the lower world.

dis'mal — gloomy.

pome'gran ate — a fruit resembling an orange in size and color
which grows in tropical countries.

Ju'pi ter — the ruler of the heavens.

Mer'cu ry — the messenger of the gods.

dor'mant — sleeping.

Notes and Questions. — What is the meaning of this story? What season does the first part of the story represent, and why? When Ceres mourned, what happened to the earth? What season does that represent? When Proserpina returned, what season began? When are seeds dormant in the ground? Why are certain grains called cereals? Which are the cereals? What months of the year does Proserpina live in Pluto's palace? Tell in your own words this mythological explanation of winter and summer. What is the real cause of the change of the seasons?



AUTUMN LEAVES

“Come, little leaves,” said the wind one day,
“Come over the meadows with me, and play ;
Put on your dresses of red and gold ;
Summer is gone, and the days grow cold.”

Soon as the leaves heard the wind’s loud call,
Down they came fluttering, one and all ;
Over the brown fields they danced and flew,
Singing the soft little songs they knew.

“Cricket, good-bye, we’ve been friends so long ;
Little brook, sing us your farewell song —
Say you’re sorry to see us go ;
Ah ! you are sorry, right well we know.

“Dear little lambs, in your fleecy fold,
Mother will keep you from harm and cold ;
Fondly we’ve watched you in vale and glade ;
Say, will you dream of our loving shade ?”

Dancing and whirling the little leaves went ;
Winter had called them and they were content —
Soon fast asleep in their earthy beds,
The snow laid a soft mantle over their heads.

— GEORGE COOPER.

HELPS TO STUDY

Word Study.

fare well' — parting.

fold — a flock of sheep.

fond'ly — lovingly, tenderly.

vale — a valley.

glade — a grassy open or cleared space in the forest.

man'tle — a cloak, covering.

Notes and Questions. — To what does the poet compare the falling leaves as they blow over the fields together? To what friends did the leaves bid good-by? Why do you think they would be sorry to see the leaves go? How does the poet say the leaves spend the winter? What is their bed? What is their covering? Name some trees that drop their leaves in winter. These are called deciduous trees. Name some trees that do not drop their leaves. These are called evergreen trees.

THE LITTLE LEAF

Once on a time a little leaf was heard to sigh and cry, as leaves often do when a gentle wind is about. And the twig said:

“What is the matter, little leaf?”

“The wind,” said the leaf, “just told me that one day it would pull me off, and throw me down to the ground to die!”

The twig told it to the branch on which it grew, and the branch told it to the tree. And when the tree heard it, it rustled all over, and sent word back to the leaf, “Do not be afraid, hold on tightly, and you shall not go till you want to.”

And so the leaf stopped sighing and went on rustling and singing. And when the bright days of autumn came, the little leaf saw all the leaves around becoming very beautiful. Some were yellow and some were scarlet and some were striped with both colors. Then it asked the tree what it meant. And the tree said:

“All these leaves are getting ready to fly away, and they have put on these beautiful colors because of joy.”

Then the little leaf began to want to go, and grew very beautiful in thinking of it, and when it was very gay in colors, it saw that the branches of the tree had no color in them, and so the leaf said:

“O branch, why are you lead colored and we golden?”

“We must keep on our work clothes,” said the tree, “for our life is not done yet, but your clothes are for a holiday, because your task is over.”

Just then a puff of wind came, and the leaf let go without thinking of it, and the wind took it up and turned it over and over, and then whirled it like a spark of fire in the air, and let it fall gently down under the edge of the fence among hundreds of leaves, and it fell into a dream and never waked up to tell what it dreamed about.

— HENRY WARD BEECHER.

HELPS TO STUDY

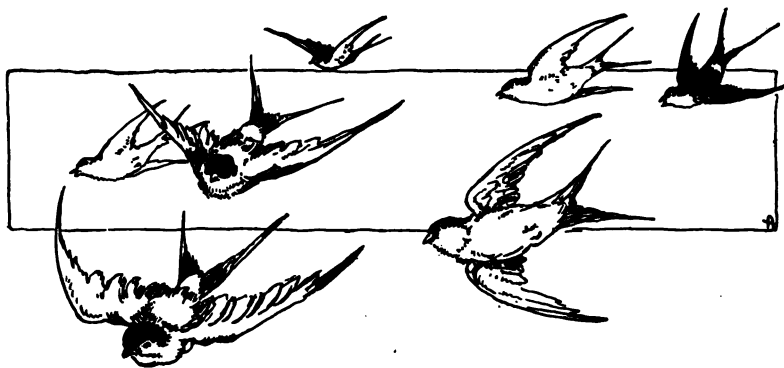
Biographical.—Henry Ward Beecher (1813–1887) was a Protestant minister, noted for his impassioned and forceful oratory. For nearly forty years he was pastor of the Plymouth Church in Brooklyn, where he preached to audiences of between two and three thousand.

Notes and Questions.—Why did the little leaf sigh? What did the tree tell the leaf? What did the wind say to the leaf? What message did the tree send back to the leaf? Why do you think the leaves change color in Autumn? What happens to leaves after they fall? Is there any sense in which the dead leaves live again? Compare the way in which the story of the falling leaves is told here with the way in which it is told in the poem “Autumn Leaves.”

TIME TO GO

They know the time to go!
The fairy clocks strike their inaudible hour
In field and woodland, and each punctual flower
Bows at the signal an obedient head
And hastes to bed.

— SUSAN COOLIDGE.



THE HAPPINESS OF THE BIRDS

There came to our fields a pair of birds that had never built a nest nor seen a winter. How beautiful was everything! The fields were full of flowers, and the grass was growing tall, and the bees were humming everywhere. Then one of the birds began singing, and the other bird said, "Who told you to sing?" And he answered, "The flowers told me, and the bees told me, and the winds and leaves told me, and the blue sky told me, and you told me to sing." Then his mate answered, "When did I tell you to sing?" And he said, "Every time you brought in tender grass for the nest, and every time your soft wings fluttered off again for hair and feathers to line the nest." Then his mate said, "What are you singing about?" And he answered, "I am singing about everything and nothing. It is because I am so happy that I sing."

By and by five little speckled eggs were in the nest, and his mate said, "Is there anything in all the world as pretty as my eggs?" Then they both looked down on some people that were passing by and pitied them because they were not birds.

In a week or two, one day, when the father bird came home, the mother bird said, "Oh, what do you think has happened?" "What?" "One of my eggs has been peeping and moving!" Pretty soon another egg moved under her feathers, and then another and another, till five little birds were hatched! Now the father bird sang louder and louder than ever. The mother bird, too, wanted to sing, but she had no time, and so she turned her song into work. So hungry were these little birds that it kept both parents busy feeding them. Away each one flew. The moment the little birds heard their wings fluttering among the leaves, five yellow mouths flew open wide, so that nothing could be seen but five yellow mouths!

"Can anybody be happier?" said the father bird to the mother bird. "We will live in this tree always, for there is no sorrow here. It is a tree that always bears joy."

Soon the little birds were big enough to fly, and great was their parents' joy to see them leave the nest and sit crumpled up upon the branches. There was then a great time! The two old birds talking and chatting to make the young ones go alone! In a little time they had learned to use their wings, and they flew away and away, and found their own food, and built their own nests, and sang their own songs of joy.

Then the old birds sat silent and looked at each other, until the mother bird said, "Why don't you sing?" And he answered, "I can't sing — I can only think and think." "What are you thinking of?" "I am thinking how everything changes: the leaves are falling off from this tree, and soon there will be no roof over our heads; the flowers are all going; last night there was a frost; almost all the birds are flown away. Something calls me, and I feel as if I would like to fly far away."

"Let us fly away together!"

Then they rose silently, and, lifting themselves far up in the air, they looked to the north: far away they saw the snow coming. They looked to the south: there they saw flowers and green leaves! All day they flew; and all night they flew and flew, till they found a land where there was no winter — where flowers always blossom, and birds always sing.

— HENRY WARD BEECHER.

HELPS TO STUDY

Notes and Questions. — When do birds return from the South? Describe the building of a nest. Why did the birds sing? How were the little birds fed? How did they learn to fly? At what time of year do birds sing their best? Why are they so quiet in the late summer and fall? Have you ever seen flocks of birds flying south? Name some birds that stay north all winter. Name some birds that come and go with the seasons.



BOB WHITE

I see you on the zigzag rails,
You cheery little fellow !
While purple leaves are whirling down,
And scarlet, brown, and yellow.
I hear you when the air is full
Of snow-down of the thistle ;
All in your speckled jacket trim,
“Bob White! Bob White!” you whistle.

Tall amber sheaves, in rustling rows,
Are nodding there to greet you ;
I know that you are out for play —
How I should like to meet you !
Though blithe of voice, so shy you are,
In this delightful weather ;
What splendid playmates you and I,
Bob White, would make together !

There, you are gone ! but far away
I hear your whistle falling.
Ah ! maybe it is hide and seek,
And that's why you are calling.
Along those hazy uplands wide
We'd be such merry rangers ;
What ! silent now, and hidden, too ?
Bob White, don't let's be strangers.

Perhaps you teach your brood the game,
In yonder rainbowed thicket,
While winds are playing with the leaves,
And softly creaks the cricket.
"Bob White ! Bob White !" — again I hear
That blithely whistled chorus.
Why should we not companions be ?
One Father watches o'er us !

— GEORGE COOPER.

HELPS TO STUDY

Word Study.

zig'zag — having short, sharp turns.

am'ber — a clear, light yellow.

ha'zy — misty, not clear.

up'lands — high ground.

rang'er — rover.

rain'bowed — like a rainbow.

cho'rus — a number singing in concert.

Fa'ther — God.

thick'et — a wood.

Notes and Questions. — Describe Bob White. What time of the year are leaves scarlet, brown, and yellow? When is "the air full of the snow-down of the thistle"? What greets Bob White? Why is Bob White difficult to get acquainted with? What game did the poet think he was playing? What is meant by "teaching your brood the game"? What are the colors of the rainbow? What is the meaning of the last two lines?

My garden invites into it all the birds of the country by offering them the conveniency of springs and shades, solitude and shelter, and I do not suffer any one to destroy their nests in spring or drive them from their usual haunts in fruit-time. . . . By this means I have always the music of the season in its perfection.

—JOSEPH ADDISON, "Letter on Gardening."

WHAT GEORGE LEARNED ON THE FARM

George awoke the first morning at the farm to hear the roosters crowing, the cows mooing, the sheep bleating, and the men cheerily whistling as they hurried about the chores. No thought of turning over for another nap entered his head, but in quick time he was dressed and ready for the morning meal. Breakfast over, George hastened out of doors and was soon eagerly watching Tom, who had been directed to cut the grass around the edges of one of the fields which had been previously mowed. Here for the first time he saw a scythe and learned its use.

For a while George watched Tom's steady swing of the scythe as he slowly cut a swath the length of the field. Then he hastened to another field where the mowing machine was steadily moving across the lot. What an improvement! What a saving of labor! How easily those knives moved through the grass, laying every spire low as soon as it was touched! How much more even the cut, though Tom was skilled with the scythe! The horses drew the machine with ease and the driver had a comfortable seat. However, it was plain that he must keep his head clear and his eyes open, to attend properly to every part of the instrument.

When noon came George was tired and heated, and he gladly remained in the house after dinner. Here he found his favorite encyclopedia and was soon hunting up the history of the invention of the mower. He was sur-

prised to learn how short a time it had been in use. From the beginning of history the crooked sickle and the straight scythe had been almost the only tools used for cutting grass and grain. Not until about the middle of the last century had practical mowing machines come into use. But now, except on very small or rocky farms, the horse mower is an absolute necessity.



HARVESTING WITH THE SCYTHE

The next day George again visited the fields to see the next step in the process of making hay. First he found Tom, with a fork, turning over the grass which he had mowed the day before. Then he went to the other field, where he saw the same work being done by a machine. The mower had left the grass in heaps so that the sun could reach only the surface. It is necessary that hay should be thoroughly dried as quickly as possible. Across the field and back again went the hay tedder, its forks picking up the grass and tossing it in every direction. One horse only was needed, and the driver was a boy.

The third day George was again in the field. Once more the grass was turned. Then in the late afternoon it was prepared for the barn. Tom could only use the small hand rake, for his work was close to the fence; he was simply cleaning up what the machines had failed to reach. But in the field where George had watched the mower and tedder, machinery and horse power were again in use. A horse went back and forth, drawing a horse rake behind him. Now and then, at regular intervals, up came the rake, a pile of hay was left, and on went the horse. Then a hay sweep passed along at right angles to the rake and soon the hay was in piles. As the field was very smooth and free from stones, a hay loader was used to place the hay upon the wagon. A boy drove the horses, two men laid the load, and soon the wagon was started for the barn. The old-fashioned, slow, hard work of lifting the hay by the forkful into the barn was no longer necessary. Hay forks, run by horse power, grappled the hay, and lifted the load. Conveyers carried the hay to the right point and dropped it in the mow.

Such was the work done during the first three days that George spent on the farm. He saw the old-fashioned hand work and the modern use of labor-saving machinery. Then he studied his books. In them he found that the hand labor of cutting, drying, and housing the hay used to cost about five dollars a ton, and that now, with the best of modern machines, it need cost not more than one dollar a ton. This machinery is of great value to the farmer and also to those who buy the hay; for the farmer can sell his hay at a lower price, since it costs him less to make it.

This was the last of the haying. For several weeks George watched the hoes and the harrows, as they kept the gardens and fields in good condition. Then came harvest time. Potatoes were first in George's thoughts, and when he learned that they were to be dug on the morrow he was thoroughly aroused. But he met with disappointment. The potatoes on this farm were not



HARVESTING WITH THE CRADLE

dug by machinery. The common hoe or the specially shaped potato hoe were the only tools. He learned that plows are often used to help the hoes, and that good machines for digging potatoes have been invented and are used on most farms where potatoes are the main crop, but they are not in general use on small farms where only a few potatoes are grown.

At last grain harvest time came. This was the time to which George had long looked forward. Now he could see the wheat cut and threshed. This he was sure was the best work of the farmer. But when he saw Tom

take the short, crooked sickle, cut some grain with that, gather it in his arms, and tie a cord around it, he could scarcely control himself. "Is that the way grain is harvested?" he said. Then when he saw the grain laid on the barn floor and struck rapidly by flails in the hands of two men, he declared, "If that is what the farmer has to do to get a little grain, then I do not want to be a farmer."

"Well," said Mr. Miller, "that is just what all farmers had to do until within fifty years."

But George soon saw a different method. This first handwork had been merely to harvest a small amount of early grain; a few days later the machines were brought out. Now George was happy. At last he saw a reaping machine and a combined reaper and binder. This interested him the most. He watched the machine as the horses drew it along the edge of the standing grain. He saw the grain cut and laid upon a platform, carried up into the machine, taken by two arms called packers, gathered by them into bundles, bound by cords, and thrown to the ground. What more could be asked of any machine?

And yet there is a new type of harvester that has been used in San Joaquin Valley, California. It cuts a swath fifty-two feet in width. It not only cuts the grain but it threshes it as well. It makes the sacks and fills them as it travels over the field. It is said to cut an area of a hundred acres a day, and at the same time thresh the grain and fill fifteen hundred sacks.

Later in the autumn came the thresher. That belonging to Farmer Miller was run by horse power. Two

horses stood upon a platform, constantly stepping forward but not moving from their position. Instead the platform moved backward and this turned the machinery. The men placed the grain stalks in the hopper and the threshed grain came out of the machine, flowing into sacks,



MCCORMICK'S FIRST REAPER, 1831

which when filled were tied by the men and set aside ready for the market.

The reaper and the thresher seemed to George the greatest of inventions. He obtained a book on inventions, and for many days he was buried in it. He read of the Englishman, Henry Ogle, whose reaper, made in 1822, aroused the anger of the working people, who threatened to kill the manufacturers if they continued to make the machines; of Patrick Bell's invention, which, though successful, was forgotten for twenty or thirty years; of Cyrus H. McCormick, the American, whose reaper first obtained a lasting success.

Most of all he was interested in the account of the first trial of reapers in England, at the time of the world's fair in 1851. What a joke it was for the *London Times* to poke fun at the McCormick machine, as it was exhibited in the Crystal Palace! How the great newspaper did wish that it had kept quiet when a few days



THE MODERN BINDER

later it was compelled to report the complete success of the ridiculed reaper!

The trial took place in Essex, about forty-five miles from London. Two hundred farmers were present, ready to laugh at failure or to accept any successful machine. The wheat was not ripe; the crop was heavy; and the day was rainy. The Hussey reaper was first tried but was soon clogged by the green, wet grain. The judges proposed to discontinue the trial, as the conditions were so unfavorable. But the agent of the McCormick reaper protested. His machine would work under any condi-

tions; he wished that the gentlemen who had taken the pains to come to the trial should have a chance to see the McCormick. Accordingly it was tried, and, in spite of everything, it went steadily forward, cutting all before it. Success was evident, and the English farmers gave three cheers for the American reaper.



MODERN OIL TRACTOR OPERATING FIVE BINDERS

Another trial, at which the reaper was timed, showed that it could cut twenty acres a day with ease. Even the laboring men realized that the machine would come at once into use; one, who was among the interested, took his sickle, and broke it in two across his knee; he said that he would no longer need that.

Four years later a trial took place in France also. Here three American, two English, and two French machines were tested. McCormick's reaper easily came out ahead, with the other American machines close behind. At the same time four threshing machines were tested.

Six men with their flails, working as hard as they could, obtained fifty-four quarts of wheat in half an hour; the American thresher gave out six hundred and seventy-three quarts in the same time!

We have spent much time on farming machinery. We must now leave George to a further study of farm life and farm work. So far he has only examined tools and machinery. He has learned from experience, however, that a modern farmer has much more than this to learn, and much work to do that cannot be done by machinery. He realizes that much study is needed to make a successful farmer. He finds that nearly every state in the Union has one or more agricultural colleges, and that the United States does its share in giving aid and information to farmers. He still desires to be a farmer, but he is glad that it is a modern farmer that he must be. He goes back to school, eager to prepare himself to enter the best agricultural college that he can find, in order that he may be ready for intelligent farming as soon as opportunity comes.

— WILLIAM A. MOWRY.

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HELPS TO STUDY

Word Study.

bleating — crying like a sheep.

chores — small jobs of work.

scythe — a blade for mowing grass or grain.

swath — a line of grass or grain cut and thrown together by a scythe or mowing machine.

spire — a slender stalk.

en cy clo pe'dia — a book of general information.

sic'kle — a reaping hook.

ted'der — a machine for turning hay.

in'ter vals — spaces or lengths between.

flails — wooden rods for threshing grain by hand.

San Joaquin — (San Wa-keen).

Notes and Questions. — What was the old method of cutting grass and grain? How should the grass be treated after it is cut? What is the difference in cost of cutting hay by hand and by machinery? What was the old way of threshing grain? Describe the modern harvester. Tell the story of McCormick's reaper in England. Describe the various machines that are used on a large farm. What other changes have taken place in farm life and farm methods within the last fifty years?

CONTENTMENT

And may my humble dwelling stand
Upon some chosen spot of land ;
A pond before, full to the brim,
Where cows may cool, and geese may swim.
Behind, a green, like velvet neat,
Soft to the eye, and to the feet,
Where odorous plants in evening fair
Breathe all around ambrosial air.

— MATTHEW GREEN.



THE WAY FOR BILLY AND ME

Where the pools are bright and deep,
Where the gray trout lies asleep,
Up the river and o'er the lea,
That's the way for Billy and me.

Where the blackbird sings the latest,
Where the hawthorn blooms the sweetest,
Where the nestlings chirp and flee,
That's the way for Billy and me.

Where the mowers mow the cleanest,
Where the hay lies thick and greenest ;
There to trace the homeward bee,
That's the way for Billy and me.

Where the hazel bank is steepest,
 Where the shadow lies the deepest,
 Where the clustering nuts fall free,
 That's the way for Billy and me.

But this I know, I love to play,
 Through the meadow, among the hay;
 Up the water and o'er the lea,
 That's the way for Billy and me.

— JAMES HOGG.

HELPS TO STUDY

Biographical. — James Hogg, the son of a poor Scottish farmer, was born in the parish of Ettrick, Selkirkshire, in 1770. His education was slight, for he was taken from school when but a boy to herd his father's sheep. But from his mother he learned to read and love folk tales, fairy tales, and imaginative literature of all kinds. He ranks as one of the great peasant poets of Scotland.

Word Study.

trout — a fresh-water fish.

o'er — over.

haw'thorn — a prickly shrub or tree of the rose family.

flee — to run away as from danger or evil.

ha'zel — a nut-bearing bush.

clus'ter ing — growing in clusters or bunches.

Notes and Questions. — Where do the gray trout lie asleep? Tell all you know about the blackbird. What are nestlings? What are hazel banks? What is meant by the "homeward bee"? Tell in your own words what the poet loved to do as a boy. Did he enjoy the things that most boys enjoy?

A STILL HUNT

"I suppose," said Robert, "that you intend to still hunt. But if so, you must remember that I have yet to learn the art; and if you wish not to be interrupted by my blunders, you had better describe now, before we go to the work, how still hunters find their game, and then how they approach it."

"They find their game by various means," Harold replied; "sometimes by watching or tracking with their own keen eyes alone; at other times using a dog trained for the purpose, as we expect to do. This latter is the easier plan, if the dog is good. When Mum has discovered a trail, he will keep directly before us, and, as the trail freshens, he will grow more cautious, till at last his step will become as stealthy and noiseless as that of a cat. We must then be cautious, too. If the underwood is thick, so that we cannot see the deer, nor they see us, until we are upon them, our success will depend upon the quickness of our shots, and the certainty of our aim; but if the woods are open, so that we can see them far off, we must use the cover of a hill or of a thicket to conceal our approach, or else one of us must leave the dog with the other, and advance upon them in the open woods."

"But you do not mean to say," Robert argued, in surprise, "that deer will allow you to come upon them in broad daylight, and shoot them down?"

"Yes, I do," he replied; "and it is easy enough if you will pursue the right plan. When a deer feeds, he directs his eyes to the ground; and during that time he sees



"THE MOMENT HE LIFTS HIS HEAD YOU MUST STAND STOCK-STILL"

nothing except what is just at his nose. That is the opportunity you must take to advance. The moment he lifts his head you must stand stock-still; and if your dress happens to be of the color of a stump, he will be apt to take you for one."

"But can you stop soon enough to imitate a stump?"

"Of course you must be quick; but this brings me to speak of another fact. A deer never puts down or raises his head without first shaking his tail. Keep your eye, therefore, steadily fixed upon him, and guide your motions

by his signs. Old Torgah used to give me an amusing account of the difference between deer and turkeys in this respect; for, with all their sagacity, in some things deer are very simple, while the turkey is so keen and watchful as to be called by hunters 'the wit of the woods.'"

In Robert's opinion, Mum's reputation for patience was, on the present occasion, not deserved; for his pace was so rapid that it was difficult for them to keep within sight; and, moreover, he soon sprang ahead, and burst into a full loud cry. "I thought you said that he hunted in silence," Robert remarked, out of breath with running.

"I said he was silent on the trail of deer," replied Harold, "but these are turkeys. Do you not see the deep print of their toes in running? Mum knows what he is about. His racing after them will cause them to

fly into the trees; and as he stands below and barks, they will keep their eyes fixed on him, and never notice us.

"There they are! See in that oak! You advance behind the cover of yonder mossy tree. I will find some other place. But as my rifle will carry farther than your smooth-bore, do not mind me, except to await my signal. As soon as you are ready to fire, let me know by a whistle; if I am ready, I will answer you; and then fire about a second after you hear me. I will take the highest turkey."



THE TURKEY IS KEEN AND WATCHFUL

They advanced silently but rapidly. Mum kept up a furious barking as the hunters approached. One whistle was heard, then another; three reports followed in quick succession; and four turkeys, two of them magnificent gobblers, tumbled heavily down from the tree.

“Well done for us! Hurrah!” shouted the boys, running to secure their prey.

It was indeed good shooting, although part of it was accidental. Robert fairly won the credit of his two shots, having brought down the birds he aimed at; but the ball from Harold’s rifle had passed through the eye of the one which he had selected, and broken the legs of another unseen by him beyond, and it now lay floundering upon the ground unhurt, except its fractured limbs, but unable to rise.

The young hunters swung their prizes over a pole, of which each took an end, and then turned their faces homewards. The distance was not more than two miles, but, burdened as they were with guns and game, and often compelled to cut their way through a network of the grapevine and yellow jessamine, or dense masses of undergrowth, they were nearly two hours in making it. Frank spied them from afar, and giving Mary a call, bounded to meet them. “Whew!” he whistled, on seeing their load, “what a bundle of turkeys!” He offered to help them carry a part of the load; but they preferred that he should show his kindness by providing them with some cool water. “We will pay you for your trouble,” said they, patting their pockets, which were stuffed with something heavy; “make haste, and let us have it.”

By the time they had wiped their wet brows, and begun

to enjoy their rest, the water came. The boys first emptied their pockets of the shells and chinquapins found during their ramble, and then cooled themselves by bathing their wrists; after which they drank, and, casting themselves at length upon their couches of moss, they talked across the tent to Sam, who seemed to be as much elated as any of them with their success.

— F. R. GOULDING.

From "The Young Marooners."

HELPS TO STUDY

Biographical.—Francis Robert Goulding, clergyman and author, was born in Liberty County, Georgia, in 1810, and died in 1881. He was famous for his stories for children. "The Young Marooners" is one of the classics of juvenile literature. It is said that the manuscript was at first rejected by several publishers until it fell into the hands of a child, who was so delighted with it that the publishers decided to take the risk of bringing it out. The story has been translated into several languages and has passed through many editions.

Word Study.

as the trail freshens — as the hunter gets near his game.

pur sue' — follow.

sa gac'i ty — sharpness.

rep'u ta'tion — good name.

frac'tured limb — a broken bone.

chin'qua pin — the dwarfed chestnut.

e lat'ed — excited because of success.

Notes and Questions. — How do still hunters find their game? Tell how a hunter should approach deer. In what way can one tell that a deer intends to move his head? Why is the turkey called "the wit of the woods"? How could Harold tell whether Mum was trailing deer or turkeys?

PLANT SONG

“O where do you come from, berries red,
Nuts, apples, and plums, that hang ripe overhead,
Sweet, juicy grapes, with your rich purple hue,
Saying, ‘Pick us, and eat us; we’re growing for you?’”

“O where do you come from, bright flowers and fair,
That please with your colors and fragrance so rare,
Glowing in sunshine, or sparkling with dew?”

“We are blooming for dear little children like you ;

“Our roots are our mouths, taking food from the ground,
Our leaves are our lungs, breathing air all around,
Our sap, like your blood, our veins courses through,
Don’t you think, little children, we’re somewhat like you ?

“Your hearts are the soil, your thoughts are the seeds ;
Your lives may become useful plants or foul weeds ;
If you think but good thoughts, your lives will be true,
For good women and men were once children like you.”

— NELLIE M. BROWN.

Notes and Questions. — This poem compares the plants to the human body. Study the last two stanzas, and note all the ways the parts of a plant are like parts of the human system. Have you ever known people who were like weeds? In what way?

THE SEED

“Whosoever plants a seed beneath the sod,
And waits to see it push away the clod,
He trusts in God.”

The old mother plant is very careful about her little seed babies. She always gives them warm, snug clothes in plenty, and she never fails to provide them with proper food until they are able to make their own living.

If you will take some bean seeds, soak them for several hours in warm water, and then examine them carefully, you will see a very interesting example of this motherly care on the part of the old plant. In the first place you will find that the little seed has a rather rough, thick outer skin or covering. Remove this and you will find that it is an easy matter to divide the seed into two almost equal parts. These two thick halves are stored-up food for the little plant to use until it gets strong enough to gather food for itself.

You must look very closely as you remove the skin and separate the halves of the seed, for the most interesting part of the whole seed is the tiny plant which is snugly tucked away right down near one end. The botanist calls this little plant the “embryo.”

Plant some beans in warm, moist soil and watch their development by every now and then pulling up one of them and examining it. You will find that the seed has gradually swollen, and that after a while the little plant

has burst out, unfolded, and begun to grow. The old seed will be pushed out of the ground, and will divide and act for a while as leaves. As soon as the little plant has used all the food which the old mother plant stored up for it, the old seed will dry up and disappear.

Try planting some English pea seed. In this case you will find that the plant unfolds and develops as the bean does, except that the old seed remains under the ground where it gives up its food to the young plant, and gradually decays and disappears.

HELPS TO STUDY

Word Study.

clod — a mass of earth.

bot'a nist — a student of plant life.

em'bry o — beginning of plant or animal life.

de vel'op ment — growth or enlargement.

Notes and Questions. — In what way does the mother plant protect the seed? What can we discover by soaking seed in warm water? What will we discover by watching some seed grow in warm, moist soil?

To the Teacher. — Have pupils bring a collection of seeds to school to study in connection with the lesson. Follow all the directions indicated.

THE PEA BLOSSOM

There were once five peas in one shell; they were green, and the shell was green, and so they believed that the whole world must be green also, which was a very natural conclusion.

The shell grew and the peas grew; they accommodated themselves to their position, and sat all in a row. The sun shone without and warmed the shell, and the rain made it clear and transparent; it was mild and agreeable in broad daylight and dark at night, as it generally is; and the peas, as they sat there, grew bigger and bigger, and more thoughtful as they mused, for they felt there must be something for them to do.

“Are we to sit here forever?” asked one; “shall we not become hard by sitting so long? There must be something outside; I feel sure of it.”

And so weeks passed by; the peas became yellow, and the shell became yellow.

“All the world is turning yellow, I suppose,” said they, — and perhaps they were right.

Suddenly they felt a pull at the shell; it was torn off, and held in human hands, then slipped into the pocket of a jacket, in company with other full pods.

“Now we shall soon be let out,” said one, — just what they all wanted.

“I should like to know which of us will travel farthest,” said the smallest of the five; “we shall soon see now.”

“What is to happen will happen,” said the largest pea.

“Crack!” went the shell as it burst, and the five peas rolled out into the bright sunshine. There they lay in a

child's hand. A little boy was holding them tightly; he said they were fine peas for his pea shooter. And immediately he put one in and shot it out.

"Now I am flying out into the wide world," said the pea; "catch me if you can"; and he was gone in a moment.

"I," said the second, "intend to fly straight to the sun; that is a shell that lets itself be seen, and it will suit me exactly"; and away he went.

"Wherever we find ourselves we will go to sleep," said the two next; "we shall still be rolling onwards": and they did certainly fall on the floor, and roll about before they got into the pea shooter; but they were put in for all that. "We will go farther than the others," said they.

"What is to happen will happen," exclaimed the last, as he was shot out of the pea shooter; and as he spoke he flew up against an old board under a garret window, and fell into a little crevice, which was almost filled up with moss and soft earth. The moss closed itself about him, and there he lay a captive indeed, but not unnoticed by God.

"What is to happen will happen," said he to himself.

Within the little garret lived a poor woman, who went out to clean stoves, and do such hard work; for she was strong and industrious. Yet she remained always poor; and at home in the garret lay her only daughter, not quite grown up, and very delicate and weak. For a whole year she had kept her bed.

Quietly and patiently she lay all the day long, while her mother was away from home at her work.

Spring came, and early one morning the sun shone brightly through the little window, and threw his rays over the floor of the room. Just as the mother was going to her work, the sick girl fixed her gaze on the lowest pane of the window.

“Mother!” she exclaimed, “what can that little green thing be that peeped in at the window? It is moving in the wind.” The mother stepped to the window and half opened it. “Oh!” she said. “There is actually a little pea that has taken root and is putting out its green leaves. How could it have got into this crack? Well, now, here is a little garden for you to amuse yourself with.” So the bed of the sick girl was drawn nearer to the window, that she might see the budding plant; and the mother went out to her work.

“Mother, I believe I shall get well,” said the sick child in the evening; “the sun has shone in here so brightly and warmly to-day and the little pea is thriving so well; I shall get on better, too, and go out into the warm sunshine again.”

“God grant it!” said the mother. She propped up with a little stick the green plant which had given her child such pleasant hopes of life, so that it might not be broken by the winds; she tied the piece of string to the window sill and to the upper part of the frame, so that the pea tendrils might twine round it when it shot up. And it did shoot up; indeed, it might almost be seen to grow from day to day.

“Now really here is a flower coming,” said the mother one morning. She remembered that for some time the child had spoken more cheerfully, and during the last

few days had raised herself in bed in the morning to look with sparkling eyes at her little garden which contained but a single pea plant.

A week later the invalid sat up for the first time a whole hour, feeling quite happy by the open window in the warm sunshine, while outside grew the little plant, and on it a pink pea blossom in full bloom. The little maiden bent down and gently kissed the delicate leaves. This day was like a festival to her.

“Our heavenly Father himself has planted that pea, and made it grow and flourish, to bring joy to you and hope to me, my blessed child,” said the happy mother, and she smiled at the flower.

But what became of the other peas? Why, the one who flew out into the wide world, and said, “Catch me if you can,” fell into a gutter on the roof of a house, and ended his travels in the crop of a pigeon. The two lazy ones were carried quite as far, for they also were eaten by pigeons, so they were at least of some use; but the fourth, who wanted to reach the sun, fell into a sink, and lay there in the dirty water for days and weeks, till he had swelled to a great size.

“I am getting beautifully fat,” said the pea; “I expect I shall burst at last; no pea could do more than that, I think; I am the most remarkable of all the five which were in the shell.”

But the young maiden stood at the open garret window, with sparkling eyes and the rosy hue of health upon her cheeks, and folded her thin hands over the pea blossom, thanking God for what he had done.

— HANS CHRISTIAN ANDERSEN.

HELPS TO STUDY

Biographical.—As a boy Hans Christian Andersen had poor advantages for obtaining an education; but he was ambitious and soon attracted the attention of a great statesman of Denmark, who asked the king to pay for Andersen's education. This the king agreed to do, and though Andersen was a tall fellow of twenty, he was not ashamed to sit with the little fellows at school and learn what he should have learned years before. A few years later his plays, poems and stories were eagerly sought, and he soon became known as The King of Fairy Tales. He was born in 1805 and died in 1875.

Word Study.

con clu'sion — decision.

ac com'mo date — adapt, suit.

trans par'ent — admitting the passage of light.

mused — studied in silence, thought deeply.

gar'ret — an attic.

crev'ice — a crack.

cap'tive — a prisoner.

ten'dril — a slender, leafless portion of a plant by which it clings to a support.

in'va lid — sick person.

fes'ti val — a day of joy.

Notes and Questions.—Tell the story of the peas from the time they found out they were in a shell until they fell into the little boy's hands. Why was the first pea glad to get into the pea-shooter? Why did the second pea wish to fly straight to the sun? What happened to the next two? Where did the last one fall? Who lived in the garret? How long did the pea lie still? What did it do in the spring? Tell how the little vine was discovered. Why was the invalid's bed put near the window? What effect did the air and sun have upon her? Which pea did the most good? What became of the other peas?



Millet

THE SOWER

THE SOWER

And great multitudes were gathered together unto Jesus, so that he went into a ship, and sat; and the whole multitude stood on the shore.

And he spake many things unto them in parables, saying, behold a sower went forth to sow;

And when he sowed, some seeds fell by the wayside, and the fowls came and devoured them up:

Some fell upon stony places, where they had not much earth; and forthwith they sprung up, because they had no deepness of earth:

And when the sun was up, they were scorched; and because they had no root, they withered away:

And some fell among thorns; and the thorns sprung up, and choked them:

But other fell into good ground, and brought forth fruit, some an hundred-fold, some sixty-fold, some thirty-fold.

Who hath ears to hear, let him hear.

— THE BIBLE.



THE LITTLE BROWN SEED IN THE FURROW

A little brown seed in the furrow
Lay still in its gloomy bed,
While violets blue and lilies white
Were whispering overhead.
They whispered of glories strange and rare,
Of glittering dew and floating air,
Of beauty and rapture everywhere,
And the seed heard all they said.

O, little brown seed in the furrow,
At last you have pierced the mold
And quivering with a life intense,
Your beautiful leaves unfold
Like wings outspread for upward flight;
And slowly, slowly, in dew and light
A sweet bud opens — till, in God's sight,
You wear a crown of gold.

— IDA W. BENHAM.

HELPS TO STUDY

Word Study.

rap'ture — delight, bliss.

pierced — made a way through.

mold — earthy material, soil.

quiv'er ing — trembling.

in tense' — earnest.

Notes and Questions. — What is meant by “lay still in its gloomy bed”? What were “the glories strange and rare” that the violets and lilies were whispering? Explain the meaning of “pierced the mold.” With what did the poet compare the first leaves of the plant? Describe the growth of the plant. What was “the crown of gold”? Name some yellow flowers.



THE PLANT

I

Parts of Plants

“The course of Nature is the art of God.”

When a seed is planted in warm, moist soil, it soon “germinates” — that is, the little plant, or embryo, begins to unfold and grow. The first thing which the little plant does is to send out a tiny root. It is very clever in doing this, for it will not be long before the food prepared for it by the old mother plant will all be used up, and then, if the young plant cannot take up food for itself, it will die.

Another very clever thing which the little plant does is to always send its roots down into the ground, and never up toward the surface. The stem comes to the

surface, while the root sinks into the soil. If you were to take a small germinating plant, with the stem nearly out of the ground and with the root several inches long, and turn it upside down in an effort to make the stem go down and the root come up, you would find that the stem would turn and come up again, and that the root would turn downward. Is it not very strange that a tiny young plant should know how to do all these things? Do you know who teaches it how?

The young plant grows out of its babyhood very quickly. Gradually, as the roots grow deeper into the soil and divide into more roots, the stem grows larger and longer, and sends out branches and leaves.

Sometime you should dig up a plant in order to see what a great network of roots it has. You probably have wondered how great forest trees stand up, especially when the wind blows strongly against them. Look for a tree that the wind has turned up, and notice its great root system. Keep your eyes open also for trees from whose roots the water has washed away the soil and see how firmly they are anchored. As plants and trees grow stronger, their roots seem to take a firmer hold of mother earth.

II

Working Together

“The forest leaves drink daily life
From out the viewless air.”

Every part of a plant, like every member of a well-regulated household, has its own special duty to per-

form. The roots about which we have already read, hold the plant in place and prevent it from toppling over. They draw water for it when it is thirsty and gather food for it when it is hungry. Sometimes, when the food is not in proper condition, the roots help to prepare it.

Plants cannot take in solid food and chew it as we do. For this reason they cannot use food unless it is first dissolved in water. You will say then, that a plant cannot eat anything but soup, and this is about true. The roots, which take up the plant's food, are covered with a thin, soft skin, or bark; and the food, which is dissolved in water, soaks through this bark skin. It is then carried along the root to the stem of the plant.

It often happens, also, that the roots act as a storehouse for the plant food. When the soil is rich, the weather good, and there is plenty of moisture, the plant may take up more food than it needs for its growth. When this happens, the surplus food may be stored away in the roots themselves for the plant to draw on when hard times come. You may work hard when you feel like it, make more money than you need, and deposit what you do not use in a bank for safe-keeping. Then when you cannot work, you can draw your money out of the bank for use. This is just what the turnip, the potato, the beet, and a number of other plants do. The food in their large, thick roots is their provision against hard times.

Another important part of the plant is the stem. This is to the plant what the spinal column is to the human body, that is, it holds the parts of the plant

together. On the lower end of the stem the roots are found, and on the upper end, the limbs, branches, and leaves.

After the plant food, dissolved in water, has been carried by the roots to the stem, the stem takes charge of it and conveys it to the limbs, and the limbs convey it, in turn, to the branches and the leaves.

The leaves have a very important duty to perform. When the food reaches the leaves through the roots, stem, and branches it is in a very crude condition — so crude that the plant cannot use it for further growth. It is the duty of the leaves to give it a special treatment, or to digest it, somewhat as our stomachs digest our food. This work of the leaves converts the crude food into starch, sugar, protein, and other good things which the plant can easily use. After the food is thus acted upon by the leaves, it passes back to all parts of the plant and is used in producing growth.

The green leaves also act as lungs for the plants. On the under side of the leaves are small openings called “pores” through which air is taken in. There is a green coloring matter in the leaves, which has the power of taking from the air something which the plant needs for its growth.

One important element of the air is an invisible gas called “carbon dioxide.” This gas is a mixture of two elements known as “carbon” and “oxygen.” Carbon is very necessary to the growth of plants, and oxygen is very necessary to the growth of animals. But when the plant helper, *carbon*, and the animal helper, *oxygen*, are mixed together as they are in the carbon dioxide of

the air, they form a gas that is poisonous to both plants and animals. When plants breathe in this carbon dioxide in the air through the under side of their leaves, the green coloring matter in the leaves separates the poisonous gas, taking the carbon for use in the plant's growth and sending the oxygen out into the air.

III

How Long Plants Live

Each year the farmer plants corn. It grows for one season, produces ears, then dies, decays, and disappears. Plants that thus make the complete round of life — that is, grow from the seed, make plants, flowers, and seed again in one season — are called "annuals." Most of the plants of the fields belong to this class.

If you were to plant some cabbage seeds, you would notice that they grow plants and produce thick bunches of leaves, or "heads," during the first season's growth. Then if you were to take care of these cabbages during the winter and plant them again in the spring, they would be found to produce seed the second season. In other words, the cabbage spends the first year getting ready, and the second year in producing seed. The cabbage, therefore, is a "biennial," or a plant that requires two years to complete its round of life.

There is another large class of plants which includes those that live three or more years and produce fruit or seed each year without having to be replanted. Plants of this class are called "perennials." A good example is the apple tree.

HELPS TO STUDY

Word Study.

- ger'mi nates** — starts to grow.
clev'er — knowing, ingenious.
an'chored — firmly fixed.
dis solved' — changed to liquid.
sur'plus — more than required.
de pos'it — place.
pro vis'ion — preparation.
con vey' — carry.
spi'nal column — the vertebræ.
crude — rough, in its original state.
con verts' — turns.
in vis'i ble — not able to be seen.
ox'y gen — one of the elements.

Notes and Questions. — Why does a plant send out roots? Why do the roots go down while the stem comes up? How do plants feed? What can you say of the roots of the turnip, potato, or beet? What service is performed by the leaves? Describe the action of the leaves on carbon dioxide. Explain the difference between “annuals,” “biennials,” and “perennials.” Give examples of each.

To the Teacher. — Plant some corn in a pot or can and after the seeds have sprouted, push away the soil and expose the root growth.

THE TREE THAT TRIED TO GROW

One time there was a seed that wished to be a tree. It was fifty years ago, and more than fifty — a hundred perhaps.

But first there was a great, bare granite rock in the midst of the Wendell woods. Little by little dust from a squirrel's paw, as he sat upon it eating a nut, fallen



leaves, crumbling and rotting, and perhaps the decayed shell of the nut — made earth enough in the hollows of the rock for some mosses to grow, and for the tough saxifrage flowers, which seem to thrive on the poorest fare, and look all the healthier.

Then, one by one, the mosses and blossoms withered, and turned to dust; until, after years and years, there was enough to make a bed for a little feathery birch seed which came flying along one day.

The sun shone softly through the forest trees; the summer rain pattered through the leaves upon it; and the seed felt wide-awake and full of life. So it sent a little, pale green stem up into the air, and a little white root down into the shallow bed of earth. But you would

have been surprised to see how much the root found to feed upon in only a handful of dirt.

Yes, indeed! And it sucked and sucked away with its little hungry mouths, till the pale green stem became a small brown tree, and the roots grew tough and hard.

So, after a great many years, there stood a tall tree as big around as your body, growing right upon a large rock, with its big roots striking into the ground on all sides of the rock, like a queer sort of wooden cage.

Now, I do not believe there was ever a boy in this world who tried as hard to grow into a wise, or a rich, or a good man, as this birch seed did to grow into a tree, that did not become what he wished to be. And I don't think anybody who hears the story of the birch tree, growing in the woods of Wendell, need ever give up to any sort of difficulty in this way, and say: "I can't." Only try as hard as the tree did, and you can do everything.

— FRANCIS LEE.

HELPS TO STUDY

Word Study.

midst — the middle.

sax'i frage — a flowering plant generally found growing in rocky ground.

fare — food.

birch — a tree.

Notes and Questions. — Tell how the earth accumulated in the hollow in the rock. How did the birch seed reach the hollow? What caused the seed to send a pale green stem into the air, and little pale roots into the soil? How did the little stem get food? What did it finally become? What lesson may a boy or a girl learn from a birch tree that grew in the Wendell woods?



THE TWIG THAT BECAME A TREE

The tree of which I am about to tell you was once a little twig. There were many others like it, and the farmer came to look at them every day, to see if they were all doing well.

By and by he began to take away the older and stronger twigs, and one day he dug up this little tree and carried it away to an open field.

There its roots were again put into the soft, warm ground, and it held its pretty head up as if looking into the blue sky. Just at sunset the farmer's wife came out to look at the new tree.

"I wonder if I shall ever see apples growing on these twigs," she said.

The little tree heard it, and said softly: "We shall see! Come, gentle rain and warm sun, and let me be the first to give a fine, red apple to the farmer's wife."

And the rain and the sun did come, and the branches grew, and the roots dug deep into the soft ground, and at last, one bright spring day, the farmer's wife cried:

“Just see! One of our little trees has some blossoms on it! I believe that, small as it is, it will give me an apple this autumn.”

But the farmer laughed and said: “Oh, it is not old enough to bear apples yet.”

The little tree said nothing, but all to itself it thought: “The good woman shall have an apple this very year.”

And she did. When the cool days of autumn came, and the leaves began to fade and grow yellow, two red apples hung upon one of the branches of the tree.

— ANONYMOUS.

HELPS TO STUDY

Notes and Questions. — Which twigs did the farmer transplant first? Where did he plant the twig mentioned in this story? How old are apple trees when they begin to bear? Tell about the surprise the little tree prepared for the farmer's wife.

WORK

Down and up, and up and down,
Over and over and over ;
Turn in the little seed, dry and brown,
Turn out the bright red clover.
Work, and the sun your work will share,
And the rain in its time will fall ;
For Nature, she worketh everywhere,
And the grace of God through all.

— ALICE CARY.

PLANT IMPROVEMENT

I

How to Make Better Plants

“O, Painter of the fruit and flowers,
We own thy wise design,
Whereby these human hands of ours
May share the work of Thine!”



THE CONCORD GRAPE AND ITS
WILD ANCESTOR

Most of the excellent fruits and vegetables and nuts which we now enjoy were once in a crude, undeveloped condition.

Did you ever see a wild tomato? Did you notice its insignificant size and its “weedy” flavor? It was from this wild plant that the delightful tomato of to-day has been made. The wild sour grape, too, is the grandfather of the luscious grapes that we enjoy so much in the

late summer. As it was with the tomato and the grape, so has it been with nearly every plant that man uses. Each one has been brought to its present state of improved usefulness through care, selection, and breeding by skillful men.

Now let us try to understand how these wonders have been wrought. All plants are in general like the parent plants, but individuals of the same family differ from each other. Did you ever notice that all children may resemble their parents, but that the brothers and sisters of a family may not be at all alike? Those who have helped to give us the fine, luscious fruits and vegetables of field, orchard, and garden by improving the plants have taken advantage of two great principles of life; the first is that plants resemble their parents, and the second, that plant children of the same parents differ from one another.

If you go out among the plants of any crop, you will observe that some are better developed than others, and bear better fruit. Suppose that this year we gather our seed for planting only from these fine plants. More of our plants next season will be like the fine ones first selected. Now, if we were to repeat this each year, we would gradually improve the whole crop, because we would constantly be choosing our parent plants only from the best. This is true of all plants. Every farmer should improve his crops by selecting the best for seed.

II

How to Make More Plants

“Accuse not Nature, she hath done her part;
Do thou but thine!”

I believe that every wide-awake, thinking boy and girl in America would like to see more roses growing in the home yard. I believe that they would like to see

fine roses blooming in the place of those inferior ones that are so often seen; and that they would be glad to see every poor peach tree in the country made to bear fine fruit. This can be done and without the aid of a fairy godmother.

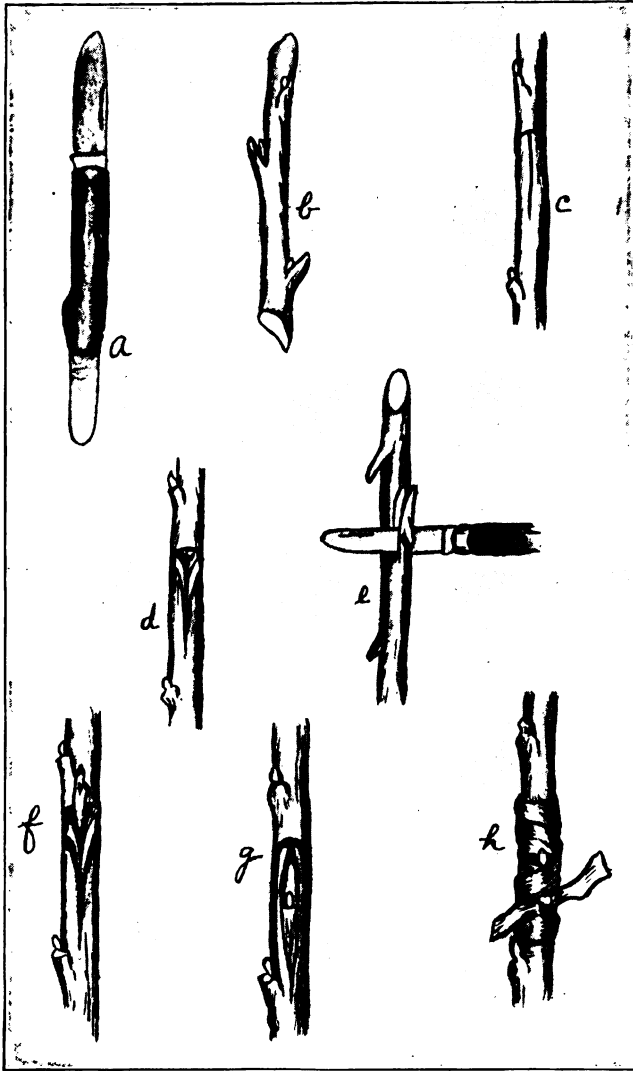
The one thing needed is that the boys and girls of to-day learn how to make more plants and finer plants. Plants may be reproduced or increased in number in several different ways, the easiest and most natural way being to plant the seed.

Sometimes, however, plants do not make seed, and sometimes, even when they do, the seed fail to germinate, while other plants make seed only occasionally. In these cases where reproduction from the seed is difficult or impossible, part of the plant itself may be used from which to make new plants.

If your friend or neighbor has a beautiful rosebush and you wish to have one like it, you may get from it a "cutting" or a shoot. Take this home and bury one end of it several inches deep in warm, moist soil. After a time it will have taken root, that is, it will have sent out roots from the end and from some of the buds which are below the ground.

Another way of reproducing plants is by "grafting." In this case a young shoot, or "scion," is taken from the plant which is to be reproduced, and is inserted into the root or stock of a similar plant. This must be done in such a way as to bring the line between the bark and the wood of the shoot or scion in contact with the line between the bark and the wood of the root or stock.

"Budding" is very similar to grafting. In this method



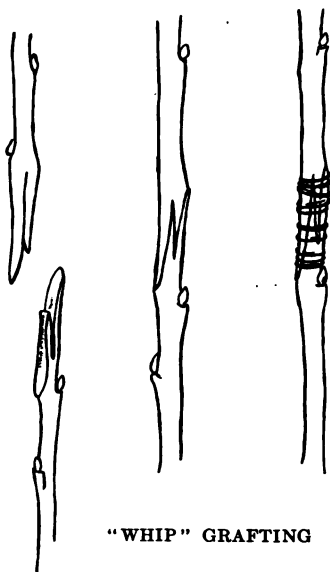
BUDDING

(a) Budding knife; (b) bud stick; (c) incision; (d) opening of bark for inserting bud; (e) removing the bud; (f) inserting the bud; (g) bud in place; (h) bud properly wrapped.

of reproducing plants the bud of the desired plant is inserted under the bark on a stem of a similar plant. In budding, as in grafting, it is necessary to insert the bud so that the inner layer of its bark will come in contact with the layer between the bark and the wood of the stem.



CLEFT GRAFTING



"WHIP" GRAFTING

Sometimes you will see plants that send out runners along the top of the ground which, at the joints or "nodes," take root. After these runners have formed sufficient root systems at the joints, they may be cut off from the old plant and allowed to become independent plants. The strawberry is often treated in this way.

Now do not be satisfied with merely reading this lesson. Take it as a guide for experiments. You will probably not be able to graft or bud plants for some time, but you should take the time to watch the process if any one in your neighborhood will be kind enough to show you how it is done.

HELPS TO STUDY

Word Study.

in sig ni'fi cant, small, unimportant.

lus'cious — juicy, sweet.

in di vid'u al, one single thing, one out of a group.

sci'on — a young shoot.

ac cuse' — blame.

in fe'ri or — poorer in quality or value.

in sert'ed — pushed in.

sim'i lar — like in kind.

de sired' — wished for.

con'tact — close touch.

Notes and Questions. — In what way may plants be improved by seed selection? Explain the reproduction of plants by cuttings. How is grafting done? Explain the process of budding. What is meant by "nodes"? Name all the wild varieties of useful plants with which you are acquainted. Did you ever see the small red or yellow tomato about the size of the end of your thumb? How has man transformed this original tomato into our large varieties? Name the plants you know which do not bloom. Does an elm tree bloom? Have you ever seen a sweet potato blossom? Name all the ways in which plants are reproduced. Give an example of each. Tell how men produce cotton with a longer and finer fiber, or new varieties of corn.

LUTHER BURBANK

We are now to read the story of a man, who, when he was a little boy, loved plants better than animals, and would caress and fondle flowers as other children pet their dogs and cats. His name is Luther Burbank and he is known all over the world as the most wonderful developer of plants.

The story is told of Burbank that when he was a mere baby in his cradle nothing made him happier than to give him a flower. It is said that he would hold the blossom tenderly and lovingly in his hands and admire it in a wonderful way. Once when he was thus holding a flower which his mother had given him, a petal was noticed to drop from it. Instantly the baby Burbank reached down, took the petal, and tried his very best to place it back where it belonged.

Later, he had for a pet and constant companion a lobster cactus which he would carry from place to place. One day, in moving his pet, he dropped and broke it. The loss of this plant, it is said, caused the young naturalist the deepest grief.

This boy who loved flowers so dearly has become in his later life famous throughout the world because of his work with plants. He was born at Lancaster, Massachusetts, March 7, 1849. His father was of English origin and was a great lover of books. His mother, who was of Scotch descent, was noted for her love of nature and of out-door life. Both of these tastes were inherited



BURBANK POLLINATING A PLUM BLOSSOM

by Luther Burbank. He is a great reader of good books, and his love for the beautiful has become the passion of his life.

The Burbanks were poor, so young Luther had to work very hard. The only education he was able to obtain was such as was offered by the public schools, for he never had the opportunity of attending college. Burbank improved his time at every opportunity, however, by reading good books and by learning from everything about him.

When not in school, he at one time in his youth held a position in a factory where he earned a small income. It is said that while working in this factory he invented a machine which proved very valuable to his employers, but for which he received only a raise in salary. As a result of this invention it was predicted that Burbank would become famous as an inventor.

At the first opportunity, however, he left the factory and began in a small way to raise vegetables for market. While in his potato patch one day he noticed on the top of a plant a seed ball which interested him, and he set about watching its development, hoping, from these unusual seeds, to be able to improve his variety of potato. In due time he gathered the seeds and planted them. From them came the now famous "Burbank" variety of potato, which the developer sold to a local seedsman for one hundred and fifty dollars. It is claimed by those who know, that this one variety of potato has been worth to mankind more than twenty million dollars.

While working in his garden one day, Burbank received a partial sunstroke, and was later obliged to go West to

find, a climate in which he could work out-of-doors most of the time. When he started on his journey he carried in his pockets ten of his new potatoes.

He had very little money and when he reached his new home it was necessary for him to work. He established himself about fifty miles north of San Francisco on a place that has since become famous over the entire country as "Santa Rosa, the home of Burbank."

The western country was new when Burbank moved to it, and it was then very hard to procure work. However, he was willing to do almost anything to make a living and to get a start in his profession. It is said that during his early struggles in the West he once earned a livelihood by cleaning poultry houses on a ranch, and that often he had to sleep in one of them.

Hard work, exposure, and frequent lack of food at one time brought on a fever from which he came near dying. Help came, however, in the person of a kind lady who gave him a pint of sweet milk each day. This probably saved his life. During all these privations, however, Luther Burbank held to his great purpose in life, for "his resolution was of iron, his will of steel, his heart of gold."

When he recovered from this illness he secured a position in a small nursery, but all the time watched for an opportunity to start in business for himself. It was not long before he acquired a small plot of land and started a nursery of his own. One of the first orders received by Burbank was from a man who wished to purchase twenty thousand young prune trees. Now it usually takes three or four years to get young prune trees ready for trans-

planting, but the man wanted these in a very short time. Burbank accepted the order. The only plant closely enough related to the prune to use for budding stock was the almond. The almond could be planted at that very season. Burbank scoured the country for help. He planted a large quantity of almond seed, inserted the prune buds in the almond plants, and in nine months was ready to fill the order.

In all of Burbank's work his ideal is to make new things which will be better than the old, and to improve the old. At his first opportunity, he left the nursery business and became a plant breeder, since which time he has devoted his great talents to the improvement of numberless varieties of flowers, shrubs, vines, vegetables, fruits, and nuts — to whatever contributes to the enjoyment and the comfort of mankind.

Burbank's work of plant improvement is pursued through three different channels: through improving old plants; through combining the good qualities of wild plants with those of their cultivated relatives; and through originating entirely new varieties of plants. In carrying out his work he follows this general plan: He first takes the pollen from one plant and puts it on the stigma of another plant of the same kind; then he gathers and plants the seeds which ripen from the flower he has thus pollinated. As the new plants grow, he selects for perpetuation those which show the particular qualities he desires.

In order to make rapid progress with his work, he has adopted the plan of using large numbers of plants. He will plant several thousand seeds and examine each result-



SANTA ROSA

ing plant carefully after it gets to the proper size, but he saves only those which have the qualities he is trying to develop. It often happens that he will save only a few plants out of several thousand. Sometimes, when he is making selections, he will handle thousands and thousands of plants in one day. He accomplishes this by having a number of people bring the plants to him while others take them away. He is so skillful in judging plants that he can tell almost at a glance whether a plant is what he wishes it to be in every respect. He has learned to know them as you and I know our friends and neighbors.

This story is a brief sketch of one of our greatest men — great not as the soldier or the statesman is great — but great because of his wonderful contributions to the world of growing things.

But while Burbank loves plants and flowers as few men have loved them, he loves boys and girls even more. "I love the sunshine," he writes, "I love the blue sky, trees, flowers, mountains, green meadows, sunny brooks, the ocean when its waves softly ripple along the sandy beach, or when pounding the rocky cliff with its thunder and roar, the birds of the field, waterfalls, the rainbow, the dawn, the noonday, and the evening sunset, — but children above them all. Trees, plants, flowers, they are always educators in the right direction, they always make us happier and better, and, if well grown, they speak of loving care and respond to it as far as is in their power; but in all this world there is nothing so appreciative as children, — these sensitive, quivering creatures of sunshine, smiles, showers, and tears."

HELPS TO STUDY

Word Study.

caress' — to treat in a loving manner.

devel'oper of plants — one who produces new varieties of plants.

nat'uralist — one skilled in the study of plants and animals.

descent' — birth.

inherit'ed — received by birth.

in'come — wage.

predict'ed — foretold.

pri'vation — need of the necessities of life.

scoured — searched thoroughly.

con'trib'utes to — has a share in, increases.

orig'i'nating — producing.

accom'plish'es — succeeds in.

polli'nat'ed — placed the pollen on.

perpet'uation — continuation of the kind.

Notes and Questions. — Relate the stories that show Burbank loved flowers in babyhood. Give a short account of his life up to the time he began to raise vegetables. Tell the origin of the Burbank potato. How did Burbank prove that "his resolution was of iron, his will of steel, his heart of gold"? Tell how he filled the order for twenty thousand prune trees. To what has he devoted his great talents? Mention three ways in which he improves plants. What is his general plan? How are the plants for perpetuation selected? Name the things that Burbank loves. Do you know the Shasta daisy, the spineless cactus, the wonder berry, the Burbank potato? They are all Burbank plants.



THANKSGIVING SONG

For flowers that bloom about our feet ;
For tender grass, so fresh, so sweet ;
For song of bird and hum of bee ;
For all things fair we hear or see, —
 Father in heaven, we thank thee !

For blue of stream and blue of sky ;
For pleasant shade of branches high ;
For fragrant air and cooling breeze ;
For beauty of the blooming trees, —
 Father in heaven, we thank thee !

For mother love and father care;
For brothers strong and sisters fair;
For love at home and school each day;
For guidance, lest we go astray, —
 Father in heaven, we thank thee!

For thy dear, everlasting arms,
That bear us o'er all ills and harms;
For blessed words of long ago,
That help us now thy will to know, —
 Father in heaven, we thank thee!

— SELECTED.

HELPS TO STUDY

Word Study.

Father in heaven — God.

fra'grant — sweet of smell.

gui'dance — direction.

lest — for fear that.

a stray' — out of the right way.

ills — evils of every kind.

Notes and Questions. — Mention some of the things we express thanks for in this poem. At what time of the year do we have the things mentioned in the first stanza? How can we show that we are really thankful for what is mentioned in the third and fourth stanzas? What is meant by "the blessed word of long ago"? When is Thanksgiving Day? How did Thanksgiving Day originate?

PLANT FOOD

Plants, like people, depend for their life and growth upon a continuing supply of food, but the food which plants use is very different from that which we enjoy, and is obtained in a very different way.

If you have studied physiology you have learned that we use "protein," "fat," "carbohydrates," and "minerals" for life and growth, and that it is necessary that we get some of each of these food elements. The water we drink and the food we eat constitute our two sources of supply of these valuable elements.

Plants, also, have two great sources from which to get the nourishment necessary to their life and growth. The soil under our feet and the air may be considered two big storehouses of plant food. Into these the plants send their servants for necessary supplies — into the soil the exploring roots, and into the air the green, unfolding leaves.

Like ourselves again, plants demand many different kinds of food. For variety, they look largely to the soil, for this contains seven of the leading plant food elements. There are three or four other elements which a plant may find in the soil and choose to take up, but which may not be essential to its life and growth.

For three other necessary foods, plants look usually to the atmosphere. It may seem strange but it is nevertheless true that, although the soil furnishes to the plant its greatest variety of food elements, the bulk of the plant growth is largely supplied by the food elements obtained

from the atmosphere. The air, therefore, and not the soil, is the great storehouse of plant food. The farmer is never troubled, however, about the food elements which have to be obtained from the atmosphere because they are always abundantly present. He is often troubled, however, about some of those which come from the soil as it frequently happens that a necessary element is not present in the soil in amounts sufficient to make a good crop.

There are three plant food elements which are of such great importance that it is well for us to remember their names. These are "nitrogen," "phosphorus," and "potassium." As a great many soils do not contain these three elements in adequate amounts — making it often necessary for the farmer to buy and apply fertilizers — it becomes important that we keep in mind what these very necessary fertilizing elements are.

We should remember, too, that plants cannot run about in search of food. The only way they can get their nourishment is to send their roots down into the soil and their leaves into the air to gather it for them. Understanding this, we can readily see how essential it is for every plant that we value to be given the best opportunity possible to develop a healthy root system and leaf system.

Essential Plant Food Elements:

1. *Those that come from the soil:*

Nitrogen, phosphorus, potassium, calcium, iron, magnesium, sulphur.

2. *Those that come from the air:*

Oxygen, hydrogen, carbon. Certain plants also take nitrogen from the atmosphere.

Chlorine, silicon, and aluminum are elements which are sometimes taken up by the plant, but they are not essential to its life and growth.

HELPS TO STUDY

Word Study.

ob tained' — got, procured.

phys i ol'o gy — the study of the body.

con'sti tute — make up, compose.

nour'ish ment — food.

ex plor'ing — searching for.

es sen'tial — necessary.

at'mos phere — the air.

a bun'dant ly — plentifully.

ad'e quate — sufficient, satisfactory.

Notes and Questions. — What are the great sources of plant food? What is the great storehouse for plant food? Name the three plant food elements. Name the plant foods which come from the soil. Name the plant foods which come from the air. Which plant foods do we buy in commercial fertilizer? Which kind costs most?

To the Teacher. — Cottonseed meal and nitrate of soda are rich in nitrogen. Phosphoric acid is rich in phosphorus. Muriate of potash, sulphate of potash, and kainit are rich in potassium. If possible, have small samples of these to show pupils.

A PAIR OF EAGLES

In a thick, damp wood near a lake in Levy county, Florida, stands a tall pine tree, which for fifteen years has held a nest of the bald eagle. For ninety-one feet the great pine raises its slender trunk without a branch. Thirty feet higher is the nest in the main fork of the tree, which here sends out three limbs.

The nest is a large one. Year after year it has been used, and the birds each season, in repairing it, have added material until it has become more than four feet in thickness. In width it is likewise about four feet. Some of the sticks used extend outward at the sides, making the diameter of the nest fully six feet.

The materials of the nest are largely dead twigs and small pine branches. Some are only a few inches in length, while others are two feet long. The structure is slightly basin-shaped on top, and the depression in the center is about four inches deep. This is lined with dry moss.

These shrewd old eagles have long been a terror to the wild ducks that gather in winter on the neighboring lake,



and a source of continual annoyance to the sheep raisers of the surrounding country. Their careers would long ago have been cut short if the plans of any of the numerous hunting expeditions against them had been successfully carried out.

Poison has been repeatedly set, and scores of rifle balls have sung their way through the forest, or across the lake, to strike out the lives of these troublesome enemies. But the bald eagles have lived on unharmed.

Exasperated at the number of lambs carried out of his pasture one year by these birds, the owner vowed that he would never know happiness again until he had killed at least one of the robbers. No opportunity came to him that summer for carrying out his threat.

Desiring to examine the nest more closely than could be done with an opera glass, I determined to climb the tree. This I accomplished on January twentieth. Taking a narrow board three feet long, I nailed it crosswise to the tree about five feet from the ground.

Clambering up this board by the aid of climbing irons strapped to my feet, I stood and nailed another cleat in like manner five feet above the first. A rope thrown over one shoulder and tied around the tree aided me in holding my position as I nailed.

The strips of wood were drawn up with a cord as they were used, my companion on the ground setting the nails in each beforehand. By this slow method I reached the nest at the end of an hour and a half.

Above my head was a cartload of sticks and rotting twigs which had yet to be passed. In order to climb up one of the large limbs against which the nest rested,

I was obliged to tear away several armfuls of the materials.

At length I raised my head above the level of the nest and beheld two eaglets lying flat upon their breasts. They were about the size of half-grown chickens, and had bodies covered with whitish down. They offered no resistance to my handling, and uttered only a low, whistling cry.

Soon after I began the ascent the old birds appeared. As long as I remained in the tree, they continued to soar anxiously about, at a safe distance, uttering occasionally a high-pitched scream.

Only once was there any appearance of an attack from them. The larger one, which I thus judged to be the female, while flying at a distance of perhaps one hundred yards, and at an equal elevation with myself, suddenly changed her course, and came at me straight as an arrow. With raised hatchet I awaited the assault, but when within thirty feet her courage failed, and she turned sharply to one side and passed on.

I had hoped to find eggs, and determined to be at the nest on time for this another season. The next year the weather was stormy, and I was delayed until the fourteenth of the same month. The nest was again found to contain young. This time they were larger than those of the previous year. From tip to tip of wings they measured three and one half-feet.

The feathers of the adult bird are dark brown, except the head, neck, and tail, which are white. On account of the white appearance of the head, so different from the back and wings, the bird might be thought at a dis-

tance not to have any head feathers. Hence, possibly, came the name by which it is usually known — the bald eagle. This white part of the plumage does not come until the bird is over two years old.

An eagle's foot is especially adapted to seizing and holding its prey. The muscles of the legs are so arranged that when the weight of the body is thrown on the foot, the long sharp claws are driven deep, and once they close on a victim there is no escape.

In mountainous regions bald eagles often build their nests on cliffs. In many places they are more or less destructive to lambs and young pigs.

Where the supply of fish, grouse, squirrels, or other natural prey is plentiful, domestic animals are seldom disturbed. Only once have I witnessed such a capture. An eagle carried off before my eyes a grown hen from a neighbor's barnyard.

They are especially fond of fish. These they usually procure by swooping down and snatching them from the water in their talons. It is also well known that they sometimes rob the ospreys of the fish which they have caught. There is, therefore, little neighborly love between the eagles and fish hawks of a community.

— T. GILBERT PEARSON.

From "Stories of Bird Life." Copyright, B. F. Johnson Publishing Co.

HELPS TO STUDY

Word Study.

ex tend' — stretch out.

de pres'sion — hollow.

ca reer' — course of life.

score — the number of twenty.

ex as'per at ed — provoked, angered.

op'e ra glass — a short telescope.

cleat — a piece of wood fastened across a board or tree.

ea'glets — small eagles.

down — soft, fine feathers.

as cent' — a moving upward, the act of climbing.

as sault' — a violent attack.

a dult' — a person, animal, or plant grown to full size and strength.

prey — that which is seized by a wild beast for food.

vic'tim — a person or thing destroyed in the gratification of a passion.

grouse — a bird of the same family as quail.

tal'on — the claw of a bird of prey.

os'prey — the fish hawk.

com mu'ni ty — a body of people having common rights, privileges, or interests, or living in the same place under the same laws and regulations. Hence, a number of animals living in a common home.

Notes and Questions. — Why is this kind of eagle called the "bald eagle"? How was the eagle's nest reached? Describe the bald eagle's nest. Why had attempts been made to kill the eagles? Describe the eaglets. Describe an eagle's foot. Draw it. Where do eagles build their nests? How do they obtain fish? Why is the eagle called the king of birds? The bald eagle is represented in the coat of arms, and on the coins of the United States. Why?

HUNTING OPOSSUMS

It was fortunate for the young adventurers that they had executed so promptly their intended work upon the tent, for, though they had no heavy wind, the rain poured down during the whole night; and when they rose next morning, the sky was full of low scudding clouds, which brought rain all the morning, and threatened a long continuance of it.

Contrary, however, to the expectation of the marooners, the rain began to abate about noon, and long before sunset the surface of the earth was so much dried, and the drops left upon the trees and bushes had been so thoroughly evaporated, or shaken off by the brisk wind, that the boys used the opportunity to bring in a supply of wood and lightwood. The lightwood was very rich, and split into such beautiful torch pieces, that Harold was tempted to think of a kind of sport in which he had often engaged, and of which he was very fond. "We have been pent up all day," said he to Robert; "suppose we take a fire hunt to-night."

"With all my heart," was the reply; "and I think no one will object to our having a fat roast pig for our Sunday dinner."

"Probably not," Harold rejoined; "and I am still more in favor of the idea, for the reason that, as we take such game alive, we can keep it as long as we wish."

Their preparation for the excursion consisted simply in splitting an armful of lightwood, which Harold tied

into a bundle, to be readily slung over the shoulders, by a strap.

As soon as it was dark they departed. They had not proceeded a half mile, before the quick sharp bark, first of Mum, then of Fidelle, gave indications of their having "treed" some kind of game: they barked incessantly. Hastening to the spot, the hunters saw the dogs looking eagerly up a slender, tall persimmon.

At first they saw nothing in the branches, or on the body of the tree; and had begun almost to conclude that (in hunter's phrase) their dogs had lied, when Harold took the torch, waved it to and fro behind him, walking thus round the tree, and keeping his eyes fixed on the place where he supposed the opossum to be. Presently he cried out, "We have him! I see his eyes! Mum, poor fellow," patting his head, "you never lie, do you?" Mum wagged his expressive tail with great emphasis, as much as to say that he perfectly understood both the slander and the recantation, and that he now desired nothing but the privilege of giving that 'possum a good shake. Robert also took the light, and holding it behind him, saw amid a bunch of moss two small eyes glistening in the dark.

The aim was so fair that the gun might have been used with certainty, were it not against all hunting rules; an opossum must be caught, not killed. The boys plied their ax upon the yielding wood, the eyes of the now silent dogs being fixed alternately upon the game above and the work below. The tree cracked and toppled. Mum's ears stood perfectly erect; and ere the branches had time to sway back from their crash upon the ground, he

was among them, growling at something upon which he had pounced. It was the opossum; and, like all the rest of its tribe when in the presence of an enemy, it seemed to be stone dead. Harold took it up by its scaly, ratlike tail, and went on.



THE ANIMALS SEEMED TO BE DEAD

In the course of a short walk they took a second opossum, and on their way back, a third. These were as many as they could conveniently carry; and taking their captives home, they made them secure by tying a forked stick round the neck of each, on the plan of a pig-yoke. From the moment that these singular animals found themselves in the power of their enemies, they put on all the usual appearance of death; not a muscle

twitched, nothing stirred or trembled; each limb was stiff, and each eye closed; not even the growl or grip of the dogs was sufficient to disturb their perfect repose. Robert could scarcely persuade himself that they were not really dead. Harold laughed.

"They can stand the crash of a tree and the worrying of dogs," he said, after they were made secure; "but there is one thing which they cannot stand. See here!" and he poured a cupful of cold water on each. The shock seemed to be electric. Each dead opossum was galvanized into life, and pulled stoutly to break away from its wooden fetters. "Now let us go to bed."

Next day a cage for the opossums was constructed of poles several inches in diameter, notched into each other, and approaching at the top like a stick-trap. The floor was also guarded with poles to prevent the captives from burrowing out.

— F. R. GOULDING.

From "The Young Marooners."

HELPS TO STUDY

Word Study.

ex'e cut ed — carried through, finished.

scud'ding — moving rapidly.

ma roon'er — a person who has been left on a desolate coast or island to live as best he can.

a bate' — to grow less.

e vap'o rat ed — passed off in vapor.

light'wood — fat pine used for kindling.

pent — shut in.

fire hunt — a night hunt in which torches are used.

treed — driven up a tree.

in ces'sant ly — without stopping.

per sim'mon — an American tree bearing a plum-like fruit.

slan'der — reproach.

re can ta'tion — the act of taking back something that has been said.

plied their ax — cut with their ax.

ere — before.

gal'van ized — excited as if by an electric shock.

fet'ters — anything that prevents freedom of movement.

Notes and Questions. — Tell how the boys prepared for the hunt. How did the dogs indicate they had treed some kind of game? What is meant by "they concluded their dogs had lied"? How was the opossum discovered? How did the boys secure their game? How does the opossum try to deceive its captors? How did Robert prove that the opossums were alive? Describe an opossum. How does the mother opossum carry her young? Why do the eyes of the opossum shine in the presence of the torch or other light? Do the eyes of all animals shine at night in the presence of a light? If not, which do and why? How does the opossum protect himself when attacked?



HUNTING SONG

Waken, lords and ladies gay,
On the mountain dawns the day ;
All the jolly chase is here
With hawk and horse and hunting-spear !
Hounds are in their couples yelling,
Hawks are whistling, horns are knelling.
Merrily, merrily mingle they,
“ Waken, lords and ladies gay.”

Waken, lords and ladies gay,
To the greenwood haste away ;
We can show you where he lies,
Fleet of foot and tall of size ;
We can show the marks he made
When 'gainst the oak his antlers fray'd ;
You shall see him brought to bay ;
“ Waken, lords and ladies gay.”

— SIR WALTER SCOTT.

HELPS TO STUDY

Biographical. — Sir Walter Scott was born in Edinburgh, Scotland, in 1771. Most of his childhood was spent on his grandfather's farm. As a child he delighted most to lie on the grass, watch the sheep, and listen to the legends and ballads of Scotland, about which he wrote many beautiful poems and stories when he became a man. He built a castle which he named Abbotsford, where he lived until his death in 1832.

Word Study.

in their couples — by twos.

knell'ing — sounding.

green'wood — forest.

fray'd — frayed, worn by rubbing.

brought to bay — made to take a last desperate stand against the huntsmen, when escape has become impossible.

Notes and Questions. — The old English hunting scene described in this poem is very unlike anything we have seen in America. The hawk referred to is the falcon, which was tied to the wrist of the hunter by a long cord and trained to catch birds which were brought back to the hunter. Read the stanza and name the kinds of game for which the company was hunting. Describe the growth of the deer and antlers. Describe the chase of the fox and of the deer.

BIG-SIDE HARE-AND-HOUNDS

NOTE. — This is a story of an English boy's game as it was played at the famous school of Rugby. In an English school the younger boys are called "fags," because they are obliged to wait upon the boys in the higher classes. This story is taken from "Tom Brown at Rugby."

On the last Tuesday but one of the half-year Tom was passing through the hall after dinner, when he was hailed with shouts from Tadpole, and several other fags seated at one of the long tables, the chorus of which was, "Come and help us tear up scent."

Tom approached the table in obedience to the mysterious summons, always ready to help, and found the party engaged in tearing up old newspapers, copybooks, and magazines, into small pieces, with which they were filling four large canvas bags.

"It's the turn of our house to find scent for Big-side Hare-and-hounds," exclaimed Tadpole; "tear away, there's no time to lose before calling-over."

"I think it's a great shame," said another small boy, "to have such a hard run for the last day."

"Which run is it?" said Tadpole.

"Oh, the Barby run, I hear," answered the other; "nine miles at least, and hard ground; no chance of getting in at the finish, unless you're a first-rate scud."

"Well, I'm going to have a try," said Tadpole; "it's the last run of the half."

"I should like to try, too," said Tom.

"Well then, leave your waistcoat behind, and listen at

the door, after calling-over, and you'll hear where the meet is."

After calling-over, sure enough, there were two boys at the door, calling out, "Big-side Hare-and-hounds meet at White Hall"; and Tom, having girded himself with leather strap, and left all superfluous clothing behind, set off for White Hall, an old gable-ended house some quarter of a mile from the town, with East, whom he had persuaded to join, notwithstanding his prophecy that they could never get in, as it was the hardest run of the year.

At the meet they found some forty or fifty boys, and Tom felt sure, from having seen many of them run at football, that he and East were more likely to get in than they.

After a few minutes' waiting, two well-known runners, chosen for the hares, buckled on the four bags filled with scent, compared their watches with those of young Brooke and Thorne, and started off at a long swinging trot across the fields in the direction of Barby.

Then the hounds clustered round Thorne, who explained shortly, "They're to have six minutes' law. We run into the Cock, and every one who comes in within a quarter of an hour of the hares will be counted, if he has been round Barby church." Then came a minute's pause or so, and then the watches are pocketed, and the pack is led through the gateway into the field which the hares had first crossed. Here they break into a trot, scattering over the field to find the first traces of the scent which the hares throw out as they go along. The old hounds make straight for the likely points, and in

a minute a cry of "forward" comes from one of them, and the whole pack quickening their pace make for the spot, while the boy who hit the scent first, and the two or three nearest to him, are over the first fence, and making play along the hedgerow in the long grass-field beyond. The rest of the pack rush at the gap already made, and scramble through, jostling one another. "Forward" again, before they are half through; the pace quickens into a sharp run, the tail hounds all straining to get up with the lucky leaders. They are gallant hares, and the scent lies thick right across another meadow and into a plowed field, where the pace begins to tell; then over a good wattle with a ditch on the other side, and down a large pasture studded with old thorns, which slopes down to the first brook; the great Leicestershire sheep charge away across the field as the pack comes racing down the slope. The brook is a small one, and the scent lies right ahead up the opposite slope, and as thick as ever; not a turn or a check to favor the tail hounds, who strain on, now trailing in a long line, many a youngster beginning to drag his legs heavily, and feel his heart beat like a hammer, and the bad-plucked ones thinking that after all it isn't worth while to keep it up.

Tom, East, and the Tadpole had a good start, and are well up for such young hands, and after mounting the slope and crossing the next field, find themselves up with the leading hounds, who have overrun the scent and are trying back; they have come a mile and a half in about eleven minutes, a pace which shows that it is the last day. About twenty-five of the original starters only show here, the rest having already given in; the

leaders are busy making casts into the fields on the left and right, and the others get their second winds.

Then comes the cry of "forward" again, from young Brooke, from the extreme left, and the pack settles down to work again steadily and doggedly, the whole



THE BOYS BEGAN SCRAMBLING UP

keeping pretty well together. The scent, though still good, is not so thick; there is no need of that, for in this part of the run every one knows the line which must be taken, and so there are no casts to be made, but good downright running and fencing to be done. All who are now up mean coming in, and they come to the foot of Barby Hill without losing more than two or three more of the pack. This last straight two miles and a

half is always a vantage ground for the hounds, and the hares know it well. They are generally viewed on the side of Barby Hill, and all eyes are on the lookout for them to-day. But not a sign of them appears, so now will be the hard work for the hounds, and there is nothing for it but to cast about for the scent, for it is now the hares' turn, and they may baffle the pack dreadfully in the next two miles.

Ill fares it now with our youngsters that they are Schoolhouse boys, and so follow young Brooke, for he takes the wide casts round to the left, conscious of his own powers, and loving the hard work. For if you would consider for a moment, you small boys, you would remember that the Dock, where the run ends, lies far out to the right on the Dunchurch road, so that every cast you take to the left is so much extra work. And at this stage of the run, when the evening is closing in already, no one remarked whether you run a little cunning or not; so you should stick to those crafty hounds who keep edging away to the right, and not follow a prodigal like young Brooke, whose legs are twice as long as yours and of cast iron, wholly indifferent to two or three miles more or less. However, they struggle after him, sobbing and plunging along, Tom and East pretty close, and Tadpole, whose big head begins to pull him down, some thirty yards behind.

Now comes a brook, with stiff clay banks, from which they can hardly drag their legs, and they hear faint cries for help from the wretched Tadpole, who has fairly stuck fast. But they have too little run left in themselves to pull up for their own brothers. Three fields

more, and another check, and then "forward" called away to the extreme right.

The two boys' souls die within them; they can never do it. Young Brooke thinks so too, and says kindly, "You'll cross a lane after next field, keep down it, and you'll hit the Dunchurch road below the Cock," and then steams away for the run in, in which he's sure to be first, as if he were just starting. They struggle on across the next field, the "forwards" getting fainter and fainter and then ceasing. The whole hunt is out of ear-shot, and all hope of coming in is over.

"Hang it all!" broke out East, as soon as he had got wind enough, pulling off his hat and mopping at his face, all spattered with dirt and lined with sweat, from which went up a thick steam into the still cold air. "I told you how it would be. What a thick I was to come! Here we are, dead beat, and yet I know we're close to the run in, if we knew the country."

"Well," said Tom, mopping away, and gulping down his disappointment, "it can't be helped. We did our best, anyhow. Hadn't we better find this lane and go down it, as young Brooke told us?"

"I suppose so — nothing else for it," granted East. "If ever I go out last day again," growl — growl — growl.

So they tried back slowly and sorrowfully, and found the lane, and went limping down it, splashing the cold puddly ruts, and beginning to feel how the run had taken it out of them. The evening closed in fast, and clouded over, dark, cold, and dreary.

"I say, it must be locking-up, I should think," remarked East, breaking the silence; "it's so dark."

“What if we’re late?” said Tom.

“No tea, and sent up to the Doctor,” answered East.

The thought didn’t add to their cheerfulness. Presently a faint halloo was heard from an adjoining field. They answered it and stopped, hoping for some competent rustic to guide them, when over a gate some twenty yards ahead crawled the wretched Tadpole, in a state of collapse; he had lost a shoe in the brook, and had been groping after it up to his elbows in the stiff wet clay, and a more miserable creature in the shape of boy seldom has been seen.

The sight of him, notwithstanding, cheered them, for he was some degrees more wretched than they. They also cheered him, as he was now no longer under the dread of passing his night alone in the fields. And so, in better heart, the three plashed painfully down the never-ending lane. At last it widened, just as utter darkness set in, and they came out on a turnpike road, and there paused, bewildered, for they had lost all bearings, and knew not whether to turn to the right or left.

Luckily for them they had not to decide, for lumbering along the road, with one lamp lighted and two spavined horses in the shafts, came a heavy coach, which after a moment’s suspense they recognized as the Oxford coach, the redoubtable Pig and Whistle.

It lumbered slowly up, and the boys mustering their last run, caught it as it passed, and began scrambling up behind, in which exploit East missed his footing and fell flat on his nose along the road. Then the others hailed the old scarecrow of a coachman, who pulled up and agreed to take them in for a shilling; so there they

sat on the back seat, drubbing with their heels, and their teeth chattering with cold, and jogged into Rugby some forty minutes after locking-up.

Five minutes afterwards three small, limping, shivering figures steal along through the Doctor's garden, and into the house by the servants' entrance (all the other gates have been closed long since), where the first thing they light upon in the passage is old Thomas, ambling along, candle in one hand and keys in the other.

He stops and examines their condition with a grim smile. "Ah! East, Hall, and Brown, late for locking-up. Must go up to the Doctor's study at once."

"Well but, Thomas, mayn't we go and wash first? You can put down the time, you know."

"Doctor's study directly you come in — that's the orders," replied old Thomas, motioning towards the stairs at the end of the passage which led up into the Doctor's house; and the boys turned ruefully down it, not cheered by the old verger's muttered remark, "What a pickle the boys be in!" Thomas referred to their faces and habiliments, but they construed it as indicating the Doctor's state of mind. Upon the short flight of stairs they paused to hold counsel.

"Who'll go in first?" inquired Tadpole.

"You — you're the senior," answered East.

"Catch me — look at the state I'm in," rejoined Hall, showing the arms of his jacket. "I must get behind you two."

"Well, but look at me," said East, indicating the mass of clay behind which he was standing; "I'm worse than

you, two to one; you might grow cabbages on my trousers."

"That's all down below, and you can keep your legs behind the sofa," said Hall.

"Here, Brown, you're the show-figure — you must lead."

"But my face is all muddy," argued Tom.

"Oh, we're all in one boat for that matter; but come on, we're only making it worse, dawdling here."

"Well, just give us a brush, then," said Tom; and they began trying to rub off the superfluous dirt from each other's jackets, but it was not dry enough, and the rubbing made it worse; so in despair they pushed through the swing door at the head of the stairs, and found themselves in the Doctor's hall.

"That's the library door," said East in a whisper, pushing Tom forwards. The sound of merry voices and laughter came from within, and his first hesitating knock was unanswered. But at the second, the Doctor's voice said "Come in," and Tom turned the handle and he, with the others behind him, sidled into the room.

The Doctor looked up from his task; he was working away with a great chisel at the bottom of a boy's sailing boat, the lines of which he was no doubt fashioning on the model of one of Nicias' galleys. Round him stood three or four children; the candles burnt brightly on a large table at the further end, covered with books and papers, and a great fire threw a ruddy glow over the rest of the room. All looked so kindly, and homely, and comfortable, that the boys took heart in a moment, and Tom advanced from behind the shelter of the great

sofa. The Doctor nodded to the children, who went out, casting curious and amused glances at the three young scarecrows.

“Well, my little fellows,” began the Doctor, drawing himself up with his back to the fire, the chisel in one hand and his coat tails in the other, and his eyes twinkling as he looked them over; “what makes you so late?”

“Please, sir, we’ve been out Big-side Hare-and-hounds, and lost our way.”

“Hah! you couldn’t keep up, I suppose?”

“Well, sir,” said East, stepping out, and not liking that the Doctor should think lightly of his running powers, “we got round Barby all right, but then —”

“Why what a state you’re in, my boy!” interrupted the Doctor as the pitiful condition of East’s garments was fully revealed to him.

“That’s the fall I got, sir, in the road,” said East, looking down at himself; “the Old Pig came by —”

“The Oxford coach, sir,” explained Hall.

“Hah! yes, the Regulator,” said the Doctor.

“And I tumbled on my face, trying to get up behind,” went on East.

“You’re not hurt, I hope?” said the Doctor.

“Oh, no, sir.”

“Well now, run upstairs, all three of you, and get clean things on, and then tell the housekeeper to give you some tea. You’re too young to try such long runs. Good night.”

“Good night, sir.” And away scuttled the three boys in high glee.

“What a brick, not to give us even twenty lines to

learn!" said the Tadpole, as they reached their bedroom; and in half an hour afterwards they were sitting by the fire in the housekeeper's room at a sumptuous tea, with cold meat, "twice as good a grub as we should have got in the hall," as the Tadpole remarked with a grin, his mouth full of buttered toast. All their grievances were forgotten, and they were resolving to go out the Big-side next half, and thinking Hare-and-hounds the most delightful of games.

— THOMAS HUGHES.

HELPS TO STUDY

Word Study.

last Tuesday but one — next to the last Tuesday.

tear up scent — tear paper into small bits to be dropped.

gird'ed — encircled.

su per'flu ous — unnecessary.

law — lead.

dog'ged ly — obstinately.

van'tage ground — ground which gives advantage, favorable ground.

prod'i gal — one who is wasteful.

com'pe tent — capable.

spav'ined — halting, limping.

re doubt'a ble — valiant, terrible to enemies.

rue'ful ly — woefully.

ha bil'i ment — dress.

con strued' — interpreted.

gal'ley — a large, low sailing vessel used in ancient times.

Nicias (nish i as) — famous Greek general.

sumpt'u ous — bountiful.

Notes and Questions. — Describe the opening scene in this story. Who accompanied Tom to White Hall? Describe the start off of the hares. What directions were given to the hounds? Who were to be counted? How many were in the pack? What was meant by following the scent? Describe the chase to the brook. What ill luck did Tadpole have at the brook? What did he and Tom decide to do after getting to Barby? Tell how they reached Rugby. What punishment did they expect for being late? After hearing their story, what did the Doctor tell them? How did they regard Hare-and-hounds after their grievances were forgotten?

This is a story of English school life. Have you ever played Hare-and-hounds? Tell in your own way how the game is played in America. Pick out from the story the words and expressions which you do not use in America, for example, calling-over, scud, etc. Put in your own words the meaning of these English terms. Pick out the qualities you admire in the boys of this story.

THE YEAR'S AT THE SPRING

The year's at the spring,
 The day's at the morn;
 Morning's at seven;
 The hill-side's dew pearled;
 The lark's on the wing;
 The snail's on the thorn;
 God's in His heaven —
 All's right with the world!

— ROBERT BROWNING.

A LETTER

(From Robert E. Lee to his son, G. W. Custis Lee.)

You must study to be frank with the world. Frankness is the child of honesty and courage. Say just what you mean to do, on every occasion, and take it for granted you mean to do right. If a friend asks a favor, you should grant it, if it is reasonable; if not, tell him plainly why you cannot; you would wrong him and wrong yourself by equivocation of any kind.

Never do a wrong thing to make a friend or keep one; the man who requires you to do so is dearly purchased at a sacrifice. Deal kindly, but firmly, with all your classmates; you will find it the policy which wears best. Above all, do not appear to others what you are not.



GEN. ROBERT E. LEE

If you have any fault to find with any one tell him, not others, of what you complain; there is no more dangerous experiment than that of undertaking to be one thing before a man's face and another behind his back. We should live, act, and say nothing to the injury of any one. It is not only best as a matter of principle, but it is the path to peace and honor.

In regard to duty, let me, in conclusion of this hasty letter, inform you that nearly a hundred years ago there was a day of remarkable gloom and darkness, — still known as “the dark day,” — a day when the light of the sun was slowly extinguished, as if by an eclipse.

The Legislature of Connecticut was in session, and as its members saw the unexpected and unaccountable darkness coming on, they shared in the general awe and terror. It was supposed by many that the last day — the day of judgment — had come. Some one, in the consternation of the hour, moved an adjournment.

Then there arose an old Puritan legislator, Davenport, of Stamford, and said that, if the last day had come, he desired to be found at his place doing his duty, and therefore moved that candles be brought in, so that the House could proceed with its duty.

There was quietness in that man’s mind, the quietness of heavenly wisdom and inflexible willingness to obey present duty. Duty, then, is the sublimest word in our language. Do your duty in all things like the old Puritan. You cannot do more; you should never wish to do less. Never let your mother or me wear one gray hair for any lack of duty on your part.

— ROBERT E. LEE.

HELPS TO STUDY

Biographical. — Robert E. Lee was born in Virginia in 1807. He graduated from West Point second in his class. He was commander-in-chief of the Confederate Army during the Civil War. Lee was gentle, generous, and good. All men of all nations acknowledge his genius and greatness. With Washington, Jefferson, and Lincoln his fame has become a part of the proud traditions of our country.

Word Study.

e quiv'o ca tion — a misleading expression, an untruth.

pol'i cy. — course of conduct.

ex tin'guished — put out.

con ster na'tion — excessive terror, wonder or surprise.

ad journ'ment — the breaking up of a meeting.

pro ceed' — to continue.

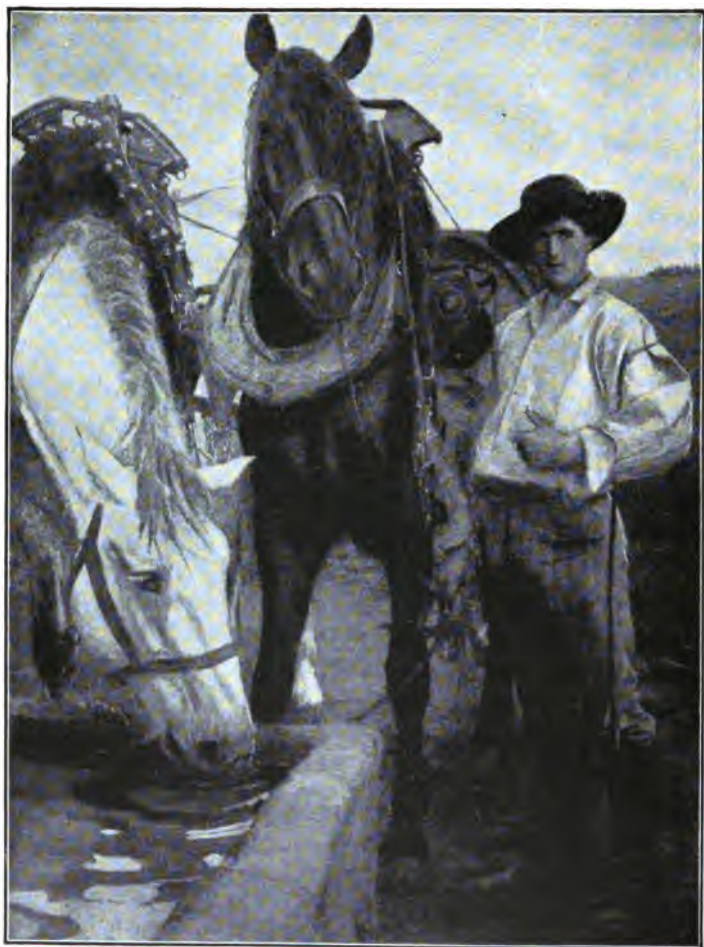
in flex'i ble — determined, resolved.

Notes and Questions. — What did Lee mean by "frankness is the child of honesty and courage"? What did he say about granting a friend a favor? What advice did he give his son in regard to making a friend and keeping one? What policy did he say would wear best? What, above all things, did he wish to impress upon his son? What did he say he regarded as a "dangerous experiment"? Explain "it is the path to peace and honor." Relate the story about the old Puritan legislator. What lesson did Lee wish his son to learn from the story? Tell the meaning of "duty is the sublimest word in the English language." Write five rules of conduct that you learned from the lesson.

DUTY

So nigh is grandeur to our dust,
 So near is God to man;
 When Duty whispers low, "Thou must,"
 The youth replies, "I can."

— RALPH WALDO EMERSON.



KINGLY WORK HORSES

A LAND WHERE EVERYBODY WORKS

There is perhaps no more careful farming anywhere on earth than in the little countries of Belgium and Holland. Neither Belgium nor Holland is more than one-fifth the size of an average Southern state, yet each supports a population three times as large. If either North Carolina or Mississippi were as thickly settled as Belgium, the population would be about 30,000,000, or one-third that of the entire United States.

Belgium is also remarkable as showing what a high degree of fertility has been developed in what was originally a poor, sandy soil — this having been so carefully built up by skillful cultivation that this little kingdom — no larger than a dozen good-sized counties — produced on its small arable area in a year more than 15,000,000 bushels of wheat, besides an enormous production of truck, vegetables, and feeding crops.

And the horses, the magnificent horses: they are themselves worth coming across the ocean to see! If I had wanted anything else to convince me of the necessity of fighting for better work horses in the South, this trip to Europe would have supplied it.

Kingly horses, bearing themselves as if conscious of royal blood, strong as lions, but thoroughly gentle, beautiful in form, hauling gigantic loads on wagons which when empty would alone make good loads for the miserable looking dray horses belabored by negro drivers in our Southern towns — and doing it all with such won-

derful ease and with such majestic and rhythmical movements that it is a positive pleasure just to watch them for an hour at a time.

Over in Europe the farmers believe in three things: (1) *Good stock*; (2) *plenty of it*; (3) *good care of it*. The only exception I would make to this last statement is



EVEN THE DOGS ARE PRESSED INTO SERVICE

the cow. It rather goes against the grain with me to see cows hitched to carts like oxen, as is commonly done in many European countries, especially Germany; but even these cows, I must say, seem sleek, well fed, and in good spirits. I haven't seen a horse's ribs nor a cow's since I have been in Europe: the European will not have poor stock.

Before passing to any other question, however, let me correct any impression that the cow is discriminated against over here in that she must often pull carts or plows, and so assist in making and harvesting the crops. *In Europe everything works.* That is why these countries support ten to twenty times the population supported by similar areas in America. Even the dogs are pressed into service, and the little carts drawn by one, two, or three big dogs are common sights in Amsterdam, Antwerp, and Brussels.

— CLARENCE POE.

HELPS TO STUDY

Biographical. — Clarence Poe is Editor of "The Progressive Farmer," and author of several books of general interest, including "How Farmers Coöperate and Double Profits," "A Southerner in Europe," and "Where Half the World is Waking Up," the latter describing his travels in Asia.

Word Study.

ar'a ble — suitable for cultivation.

gi gan'tic — immense, of great size.

be la'bored — beaten.

rhyth'mi cal — musically regular in movement.

dis crim'i nat ed against — treated unequally.

Notes and Questions. — In your geography find the area of Belgium in square miles and the area of your own state. How many times as large as Belgium is the state in which you live? What is the population of Belgium? If your state were as thickly settled as Belgium, how many inhabitants would it contain? For what is Belgium remarkable? Name some of the ways in which poor soil may be made fertile. Describe the horses in Belgium. Mention three things in which the farmers believe. To what novel use do they put the cow? Why?



THE HORSE'S PRAYER

TO THEE, MY MASTER, I offer my prayer: Feed me, water, and care for me, and, when the day's work is done, provide me with shelter, a clean, dry bed and a stall wide enough for me to lie down in comfort.

Always be kind to me. Talk to me. Your voice often means as much to me as the reins. Pet me sometimes, that I may serve you the more gladly and learn to love you. Do not jerk the reins, and do not whip me when going up hill. Never strike, beat, or kick me when I do not understand what you want, but give me a chance

to understand you. Watch me, and if I fail to do your bidding, see if something is not wrong with my harness or feet.

Do not check me so that I cannot have the free use of my head. If you insist that I wear blinders, so that I cannot see behind me as it was intended I should, I pray you be careful that the blinders stand well out from my eyes.

Do not overload me, or hitch me where water will drop on me. Keep me well shod. Examine my teeth when I do not eat; I may have an ulcerated tooth, and that, you know, is very painful. Do not tie my head in an unnatural position; or take away my best defense against flies and mosquitoes by cutting off my tail.

I cannot tell you when I am thirsty, so give me clean, cool water often. Save me by all means in your power, from that fatal disease, the glanders. I cannot tell you in words when I am sick, so watch me, that by signs you may know my condition. Give me all possible shelter from the hot sun, and put a blanket on me, not when I am working, but when I am standing in the cold. Never put a frosty bit in my mouth; first warm it by holding it a moment in your hands.

I try to carry you and your burdens without a murmur, and wait patiently for you long hours of the day or night. Without the power to choose my shoes or path, I sometimes fall on the hard pavements, which I have often prayed might not be of wood, but of such a nature as to give me a safe and sure footing. Remember that I must be ready at any moment to lose my life in your service.

And finally, O MY MASTER, when my useful strength is gone, do not turn me out to starve or freeze, or sell me to some cruel owner, to be slowly tortured and starved to death; but do thou, My Master, take my life in the kindest way, and your God will reward you here and hereafter. You will not consider me irreverent if I ask this in the name of Him who was born in a stable. Amen.

Society for the Prevention of Cruelty to Animals.

HELPS TO STUDY

Word Study.

ul'cer at ed — sore with ulcers.

glan'ders — a highly contagious disease of a horse's nose and throat.

ir rev'er ent — not respectful to God.

Notes and Questions. — When and how should we speak to our horses? What is the danger of checking a horse's head too high? Are blinders really necessary to a horse? What care should be taken in hitching a horse? Describe a good stall and a good bed for a horse. What should we do if a horse refuses to eat? Why is it wrong to cut a horse's tail? When should a horse be covered with a blanket? How should an old horse be treated?

COTTON

From white to red burns my blossom spread,
'Neath a sky of deepest blue,
A pledge for the wide world's wealth and weal,
With each summer's sun anew.
And ere fierce winter can call his clans,
Or his shrilling trumpets blow,
The fields shine white, through the autumn light,
With my harvest crown of snow!

Then on, in the eager world's emprise,
I hasten to bear my part;
There's highway for me, o'er land and sea,
And welcome in every mart.
My vassals true are the gin and screw,
The wind and the wingèd steam,
My thrall the boom of the mill and loom
And the dancing shuttle's gleam.

From rainbow tint to the opal's glint
My varying colors run,
And I change my form as the clouds that swarm
The couch of the setting sun,
The spider weaves, in her nest of leaves,
No gossamer web like mine,
And strong the grasp that my fibers clasp
In the twisted cord and line.

I enter the door of the rich and poor,
 I clothe the king and the clown,
 And serve man's need with stalk and seed
 When my leaf is sear and brown.
 A truce to your wains of golden grains,
 While my flag is still unfurled,
 O'er mill and wheel, and spindle and reel,
 I rule the trade of the world!

— ZITELLA COCKE.

From "A Cherokee Rose and other Southern Poems." Copyright by Richard G. Badger.

HELPS TO STUDY

Word Study.

weal — pros per' i ty.

clan — tribe.

em prise' — enterprise.

vas'sals — servants.

thrall — slave.

boom — noise.

gos'sa mer — fine web.

truce — peace.

sear — shriveled, dry.

wain — wagon.

Notes and Questions. — Why is cotton welcome in every mart? Into what forms is cotton changed? How does cotton serve man's need? In what way does cotton rule the trades of the world? What did Sidney Lanier mean when he called cotton "the snow of southern summers"? Describe what would happen in the world if the South should suddenly stop raising cotton.

THE COTTON PLANT

I

How Cotton Grows

A poet has said, "A thing of beauty is a joy forever," but it sometimes happens that we see a thing of beauty so often and it becomes so familiar to us that we fail to realize how lovely it is — then we miss the joy it should bring to us.

I am thinking of the cotton plant and of how little we see it as a plant. We view great fields of snowy cotton with never-failing pleasure, but we do not know the individual plant, and, not knowing, we miss a thing of beauty that should give us joy.

If the cotton plant did not grow everywhere in the South, if we had only a few plants in pots in the greenhouse or in the flower garden, we would prize it very highly as one of our most attractive plants. The next time you see a cotton field, stop and make the acquaintance of the plant itself. Near the ground you will find long, graceful limbs. Just above these will be limbs a little shorter, each successive limb growing shorter still as the top of the plant is approached, until the whole stands like a graceful pyramid. The plant is covered with large, rich green leaves, and it may have fresh flowers on it from June until frost.

The flowers are at first creamy white, but turn pink in a short time. It often happens that on the same plant are white, fluffy, open bolls and cream and pink blossoms all at the same time.

It is no wonder that Henry W. Grady should be inspired to say of the cotton plant and its importance :



A COTTON FIELD IN SUMMER

“What a royal plant it is! The world waits in attendance on its growth; the shower that falls whispering on its leaves is heard around the world; the sun that shines on it is tempered by the prayers of all the people; the frost that chills it and the dew that descends from the stars are noted; and the trespass of a little worm upon its green leaf is more to England than the advance of the Russian army on her Asian outposts. It is gold from the

instant it puts forth its tiny shoot. Its fiber is current in every bank, and when, loosing its fleece to the sun, it floats a sunny banner that glorifies the fields of the humblest farmer, that man is marshaled under a flag that will compel the allegiance of the world and bring a subsidy from every nation on earth."



A COTTON FIELD IN THE HARVESTING SEASON

II

The History of Cotton

We shall doubtless never know who were the first people to cultivate cotton. Herodotus, "the father of history," speaks of a plant in India "which, instead of fruit, produces wool, of a finer and better quality than that of sheep." Cotton has been grown in the old world

for more than two thousand years. The mummies found by Pizarro in Peru were wrapped in cotton cloth. When Columbus first visited America, he found cotton growing in the southern part of the country. Cortez found the people of Mexico using cotton cloth in 1519.

At least three-fourths of the cotton used in the world is grown in the United States, but cotton is also grown in India, Egypt, China, Brazil, Peru, Russia, Persia, Turkey, and Mexico. The production of cotton is confined to climates where the soil is warm and moist. In the southern part of the United States there exist the proper conditions of temperature, rainfall, and soil for cotton growing. In the winter and the early spring, the winds, coming from the gulf, are laden with moisture. As these winds pass northward over the cotton states, they are chilled and give up their moisture as rain. This thoroughly wets the soil. Later, as summer comes on, the conditions change; fewer rains fall, and we have the warm, moist soil from below, with the hot sun from above, making conditions most favorable for the growth of the cotton plant.

Another very favorable weather condition for cotton raising in the South is the fact that during the months for gathering the crop there is usually very little rain. This is a great advantage, as much rain at this time would injure the ripened cotton and would also prevent the picking. So well adapted is the climate in the South for the production of cotton, that Southern people have been tempted in the past to depend too much on this one great staple. The time is at hand, however, when the Southern farmer will produce nearly everything that he

needs for himself and will not have to buy so much from other sections.

The time is at hand, also, when the Southern farmer will cease shipping his raw cotton North to be manufactured and sold back to him in the clothes he wears. He will build his own factories near his own snowy fields,



A SOUTHERN COTTON FIELD

and save the price of transportation two ways. This will greatly reduce the cost of his living.

The cotton belt of the United States is found south of a line running in a southwesterly direction through the southern part of Virginia and down to the northwestern part of Georgia, thence northwest into southern Kentucky, thence nearly due west, including about all of Texas.

HELPS TO STUDY

Word Study.

pyr'a mid — a figure that slopes from a square base to a point.

tem'pered — softened.

cur'rent in every bank — as good as money.

fleece — white fibers.

al le'giance — loyalty.

sub'si dy — payment.

mum'my — an embalmed body.

Pi zar'ro, Cor tez' — Spanish explorers and soldiers.

Notes and Questions. — Describe a cotton plant. Describe the flowers. Make a list of things that we use daily that are made from cotton. Give an account of the age of cotton. What countries and climates are most favorable to raising cotton? Name the states included in the cotton belt. Locate the belt on a map. Memorize the selection from Henry W. Grady. What do you think he meant by saying "the shower that falls on its leaves is heard around the world"? Why is the "trespass of a little, green worm upon its leaf of so much consequence to England? Why is the South so well adapted to cotton growing?

THE SOIL

I

The Story of Antæus

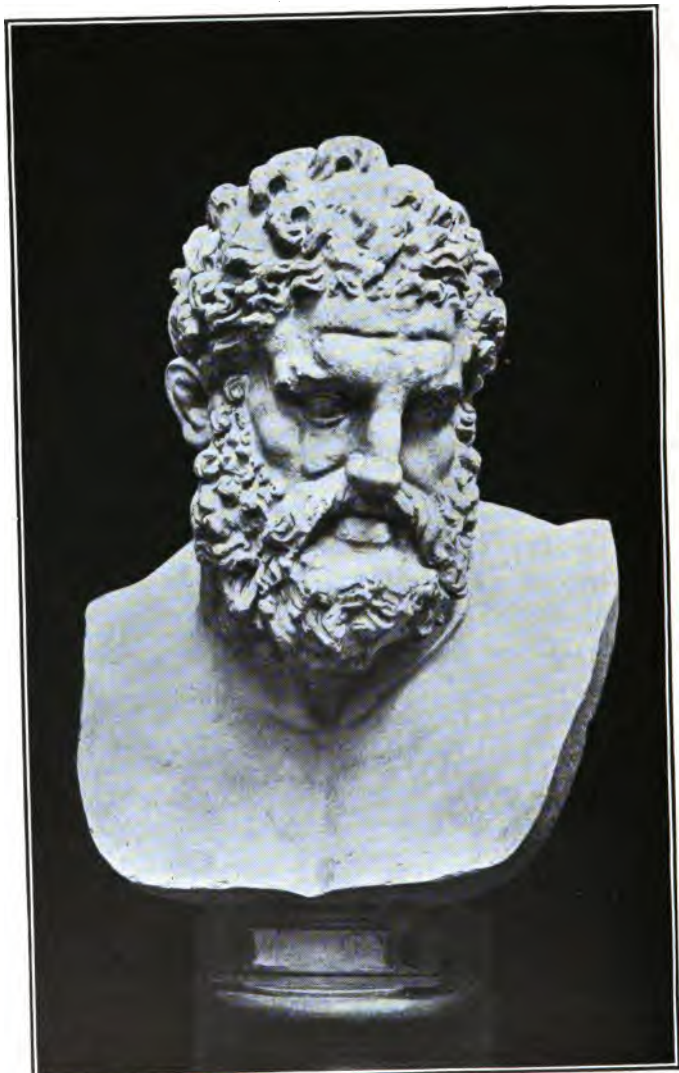
“Flower and forest and child of breath
With me have life ; without me, death !”

Most boys and girls think that the soil is a dead, uninteresting kind of substance ; but it is not dead, it is full of life. Every living thing, every plant, animal, the food we eat, the clothes we wear — even man himself — comes from the soil, and we could have no life without it.

Did you ever notice in the springtime how the new, fresh, living plants burst from the soil? Keep that remembrance with you, and always think of the soil as being the source of all life, even as it is in the spring the source of the new life which we can see all about us.

But we owe another debt to this Earth Mother, for it is to her that we must turn for a renewal of health and strength and power. The good, brown earth is a health-giving, life-giving energy ; and this latter-day cry of “back to the soil” is a warning sounded to us to return to the source of power before it is too late. The old Greeks, who had a way of teaching the great truths of life in story form, have left us, in the legend of the giant Antæus, a perfect picture of man’s dependence on his mother soil. The story in brief is as follows :

Hercules, the greatest of heroes, once found it necessary, in the course of his travels, to pass through a country



British Museum

HERCULES

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which was guarded by the giant wrestler, Antæus. It seems it was a law of this country that every stranger entering it should wrestle with the giant, and, in case of defeat, should suffer death. Now, very mighty was this Antæus, and stronger than any man or monster to whom he had ever yet been opposed. So strong was he, and so unconquerable, that men and gods alike began to suspect that he had some secret source of unlimited power. And they were right in their suspicions. Antæus knew the secret source of a new supply of vigor and strength, whenever he should need it, so he continued to triumph over all who came against him.

Then came Hercules — and hero and giant gripped in a death struggle. One long, long, terrible strain, and the giant was flung to earth, while Hercules stood panting over him. But Antæus came back — stronger and fiercer than before; and Hercules, the hero of heroes, was put to the test as they closed again. A second time was the giant thrown, and a second time he sprang back with renewed life. Again and yet again was this repeated, and every time the giant was thrown to the earth, he returned to the struggle with increased strength.

Then Hercules guessed the giant's secret. Antæus was the son of the Earth and every time he returned to his mother she gave him renewed strength and power. When hero and giant closed for the last time, Hercules tore the son of the Earth from his source of power, and, lifting him high in the air, crushed him to death between his mighty hands.

This is the story. And the great truth of life hidden in it is this. Antæus is Man — Man as the old Greeks

knew him, and Man as we know him to-day. To-day, as yesterday, the Mother Earth is man's source of health and strength and vigor and power. When man returns to his mother she renews him and sends him back to his struggle, ready for the fray. He is unconquerable as long as he can return to his source of power. It is only when man is torn from the soil and never allowed to return to it for renewed life, that he can be utterly crushed.

II

The Origin of the Soil

What is the soil? Where did it originate? The soil is made up of finely pulverized rocks mixed with decaying animal and vegetable matter. We are told by the geologists that all soil was once rock; that many years ago the outer surface of the earth was solid rock, and that a large part of this rock crust slowly decayed and crumbled into soil.

There are a great many agencies or workers, chiseling away at the rocks and causing them to crumble to pieces and form soil. The wind, carrying small particles of dust and sand, blows against the rocks and helps to wear them gradually away. In the West, and in other parts of the country where the wind blows very hard, it does a great deal towards forming soil. Running streams, carrying sand, gravel, and other foreign bodies, also aid very greatly in soil formation. You have perhaps noticed where some stream has been running over a rock and has worn a trench in it.

In early times there were, in the northern part of this country, great rivers of ice called "glaciers." These

glaciers would melt and move down grade slowly, but with terrible force, crushing and grinding the rocks as they went. This movement of the glaciers had a great deal to do with soil formation.

Freezing and thawing also cause rocks to crumble into soil. Rocks are "porous"—that is, they have very



AN AGRICULTURAL CLASS STUDYING SOILS

small, open spaces in them. Water may get into these spaces and freeze. When water freezes it expands. The expanding of the water, as it freezes in the pores of the rock, causes the rock to crack open.

Sometimes the roots of plants grow into rock crevices while they are small enough to enter easily. Then, as they grow larger, they split off pieces of the rock. Plant roots that touch the rocks may also dissolve them into soil in their search for food.

III

How the Soil Holds Water

If you pour some water on very hard ground, will it sink into the soil or will it run over the top of it? Suppose you were to pour the water on ground that had been thoroughly pulverized or loosened. Would it run away over the surface, or sink into the soil?



A SOIL BADLY CRACKED

The soil is not a solid substance like a rock, but is made up of a great many very fine particles. Take some soil in the palm of one hand and rub it with the fingers of the other hand. You can feel the fine soil grains

against the palm of your hand. These soil grains lie very close together, not so close, however, but that there are little vacant spaces between the particles. These small spaces between the soil grains are called "pores."

In some respects, then, the soil is like a sponge. If you were to dip a sponge in water, what would happen? If you were to pour water on some dry soil it would be taken up or "absorbed" by the soil just as the sponge takes up water. The water surrounds the soil grains, and when the soil is "saturated," or has taken up all the water it can, the small spaces between the soil grains are full of water. If the soil is hard and compact it will take up water slowly and will not absorb as much as soil that is loose.

HELPS TO STUDY**Word Study.**

source — place of beginning.

re new'al — act of renewing.

en'er gy — vigor, strength.

mon'ster — a large animal.

closed — came together.

fray — fight.

pul'ver ized — powdered.

ge ol'o gists — men learned in the science of the earth's structure.

chis'el ing — cutting.

gla'ci er — a huge river of solid ice.

crev'ice — a small crack.

Notes and Questions. — Who was Antæus? From what source did he derive his strength? Why could not Hercules overcome him at first? How did Hercules finally overcome him? What does this story teach us about Mother Earth? How did she help her son? Of what is the soil made? Name some of the agencies that are making soil. Describe the action of glaciers; the action of freezing and thawing; plant roots in rock crevices. What are the pores of the soil? How does the soil hold water? When is it saturated?



CULTIVATING THE SOIL

I

Preparing the Seed Bed

Do you know why the farmer plows? Would the wise farmer try to plant seed in the hard unbroken soil? The old saying, "Well begun is half done," is certainly very true of the preparation of the soil for planting. If the soil is just scratched a few inches deep and the seed planted in it, a mistake will be made that no after plowing or hoeing can fully remedy. It is necessary for the farmer to give his soil the very best of preparation, and to make the very best seed bed that he can, if he wishes to get the best crop possible.

Plant roots cannot grow through the hard, unbroken soil, and, as we have read in another lesson, it is often necessary for the roots to travel far to get food and water

for the plant. Breaking the soil to a good depth encourages the growth of the root systems of the plants.

If the soil is well broken, the water goes down into it, as it should, instead of running off over the surface and washing out gullies. Many fields once fertile have been so badly washed that they have had to be abandoned. This is because of poor plowing in the preparation of the seed bed.

It often happens that the soil may have in it enough plant food to produce a good crop, but it is not available, because the ground is never broken up so that the plant roots can find the food and water, and so that the water and air can get down into the soil. Deep, thorough plowing is very necessary for the fertility of the soil.

II

Hilly, Rolling Lands

We hear a great deal about "scientific farming," but this simply means "intelligent farming." We have made mistakes in the past, but we are learning to correct those mistakes and to guard against repeating them. As an example of intelligent farming let us consider the plowing of hilly or rolling lands. Most rolling, hilly land, if cleared and cultivated carelessly, will "erode" or wash. There are many ways in which the farmer may overcome this trouble to a large extent or avoid it altogether.

If something is kept growing on this land, the roots will prevent soil washing. You rarely ever see the land wash where the trees are left on it, even though it be very hilly or rolling. If the hillsides are too steep, they should

be left to become a forest, but if cleared they should be sown in grass, as Bermuda, for a permanent pasture. If it is necessary to cultivate the rolling hillsides, an effort should be made to keep some crop on them nearly all the time so as to keep the soil filled with roots to prevent washing. In the summer, corn, cotton, peas, or some



DEEP PLOWING IS NECESSARY

other summer crop should be grown, while in winter, some crop like rye, wheat, or clover should cover the land.

Such lands may be prevented from washing by deep, thorough breaking before the heavy rains come. If the land is well broken and pulverized, the water will go down into the soil, instead of running over the surface.

“Terracing” is another method of handling rolling lands to prevent washing. The terraces are run around

the hill, nearly or quite on a level. The soil is then plowed down from above, the rows being run parallel with the terrace or bed. The water is held by this bed until it sinks into the ground, instead of rushing down the hill and carrying the soil with it.

It is best to use several of these plans on the same land. Terrace it, break it deep and well before the heavy rains



A ONCE FERTILE FIELD, BADLY WASHED BECAUSE OF POOR TREATMENT

are due to come, and then keep a crop on the soil most of the time.

III

Why the Farmer Cultivates the Soil

Most farmers will tell you that they cultivate or plow the crop to kill the grass and the weeds, but is this the real purpose of cultivation? Killing the grass and the weeds is certainly a very worthy purpose, and if it were not done, the plant might be killed. The main purpose

of cultivation, however, is to control the moisture. There are some fields that have too much water. In that case it may be necessary to open ditches, build terraces, and run the rows in plowing so as to get rid of the excess water. But in most cases, the purpose of cultivation is



A TERRACED FIELD

to save moisture in order to help the plant over seasons of dry weather.

When it rains on ground that is loose and well prepared, the water sinks into the soil. When it ceases to rain, and the sun comes out or the wind blows, the water begins to rise from the lower layers to the surface of the soil — actually climbing from one little soil particle to another until it reaches the surface. Then it evaporates

into the air and is gone. If this process goes on long, the moisture will soon leave the soil and the plants will suffer.

Did you ever go into a lot or a back yard in dry weather and turn over planks to dig worms for fish bait? You found the soil under the plank wet or moist, did you not?



CULTIVATING THE CROP AFTER IT HAS GROWN

You have found the same thing on turning over leaves or straw. These planks, leaves, and straw acted as covers over the soil and prevented the moisture from evaporating into the air. Sometimes gardeners put leaves or straw over a potato bed or a small strawberry plat for a "mulch," as they call it. But the farmer cannot put leaves or straw over large fields, for it would take too much time and cost too much money. He can do something which is nearly as good, though. He can stir the surface of the soil to the depth of a few inches. This will dry out and

act as a mulch about the same as the planks, leaves, and straw.

When you stir the top soil you break up the hard, closely packed crust and scatter the soil grains farther apart. You remember that the moisture climbed out of the ground by catching hold first of one little soil particle and then of another higher up, until it reached the top.



DISTRIBUTION OF ROOTS

Showing how late deep cultivation destroys roots

You know how you climb up a tree from limb to limb. Now suppose somebody were suddenly to put those limbs very much farther apart — too far for you to reach. You could not climb very well then! This is just what happens when you loosen the top soil. You scatter the earth grains farther apart so that the moisture is stopped in its climbing, and has to stay underground with the roots of the plants — which is exactly what you want it to do.

This is the real object of cultivating the crop after it has grown. This should be done often, once every six to ten days, or whenever a crust forms on the surface. The cultivation should be done with some farm tool that does not go too deep and disturb the roots. This is the reason why scientists tell us to give the crop frequent shallow cultivation. If this is done as it should be, the weeds will never have a chance to give trouble, since they will all be killed when very small.

HELPS TO STUDY

Word Study.

en cour'ages — gives courage to.

a vail'a ble — in such form that it can be used.

in tel'li gent — sensible.

per'ma nent — lasting.

pul'ver ized — reduced to a fine powder.

Notes and Questions. — Why is a good seed bed necessary? What is meant by the "root system" of plants? How does water act in well-broken soil? How can plant food be made available? Name the three ways to prevent soil washing off rolling or hilly land. How does a growing crop prevent washing? How does moisture leave the soil in dry weather? How does plowing form a mulch for plants? How does a mulch prevent evaporation? What is the real purpose of cultivating the growing crop? How should it be done?

TUBAL CAIN

Old Tubal Cain was a man of might
In the days when earth was young ;
By the fierce red light of his furnace bright
The strokes of his hammer rung ;
And he lifted high his brawny hand
On the iron glowing clear,
Till the sparks rushed out in scarlet showers
As he fashioned the sword and spear.
And he sang, — “ Hurrah for my handiwork !
Hurrah for the Spear and Sword !
Hurrah for the hand that shall wield them well,
For he shall be king and lord !”

To Tubal Cain came many a one,
As he wrought by his roaring fire,
And each one prayed for a strong steel blade,
As the crown of his desire.
And he made them weapons sharp and strong,
Till they shouted loud for glee,
And gave him gifts of pearls and gold,
And spoils of the forest free.
And they sang, — “ Hurrah for Tubal Cain,
Who hath given us strength anew !
Hurrah for the smith ! Hurrah for the fire !
And hurrah for the metal true !”

But a sudden change came o'er his heart,
Ere the setting of the sun ;

And Tubal Cain was filled with pain
For the evil he had done.
He saw that men, with rage and hate,
Made war upon their kind ;
And the land was red with the blood they shed
In their lust for carnage, blind.
And he said, — “Alas! that ever I made,
Or that skill of mine should plan
The spear and the sword for men whose joy
Is to slay their fellow man.”

And for many a day old Tubal Cain
Sat brooding o'er his woe ;
And his hand forbore to smite the ore,
And his furnace smoldered low.
But he rose at last with a cheerful face,
And bright courageous eye,
And bared his strong right arm for work,
While the quick flames mounted high.
And he sang, — “Hurrah for my handiwork!”
As the red sparks lit the air ;
“Not alone for the blade was the bright steel made,”
As he fashioned the First Plowshare.

And men, taught wisdom from the Past,
In friendship joined their hands,
Hung the sword in the hall, the spear on the wall,
And plowed the willing lands ;
And sang, — “Hurrah for Tubal Cain!
Our stanch good friend is he.
And for the Plowshare and the Plow
To him our praise shall be.

But while Oppression lifts its head,
 Or a tyrant would be lord,
 Though we may thank him for the Plow,
 We'll not forget the Sword!"

— CHARLES MACKAY.

HELPS TO STUDY

Word Study.

brawn'y — strong, powerful.

wrought — worked.

spoils — things captured or taken in war.

lust — eagerness, desire.

car'nage — bloodshed.

brood'ing — thinking earnestly.

for bore' — gave up, kept from.

smite — strike.

stanch — true, firm, constant.

Notes and Questions.—Tubal Cain was the first smith of whom we have account. He is mentioned in Genesis 4:22. He began his work by making swords and spears, but when he saw what use men made of these, he let the fire go out in his forge and stopped work. At last the thought came to him that he might make plows so that men might stop fighting and cultivate the soil.

What evil is wrought by the sword? Before the invention of the plow and farming implements how did men secure food? Before the invention of farm implements could men settle down into permanent communities and build permanent homes? Why not? With the help of your teacher, discuss the effects of the invention of the plow on man and civilization.

THE HOME VEGETABLE GARDEN

I

What to Plant, and How

I once knew a boy who became so interested in a neighbor's garden that he decided to have one of his own, so he persuaded his father to give him some ground, and then went to work.

After getting this garden, the boy was always so anxious to work in it, and took so much interest in the wonderful things he was learning about plants, that his playmates became interested, also, and would often come to help him and to see his garden grow. Then, every one of the playmates wanted a garden of his own; so, after a while, the first boy's good example was being followed throughout the neighborhood. It is easy to have a garden all your own if you follow the few directions that I will give you.



The first thing to do is to pick out the place for the garden. This place should be near the house where

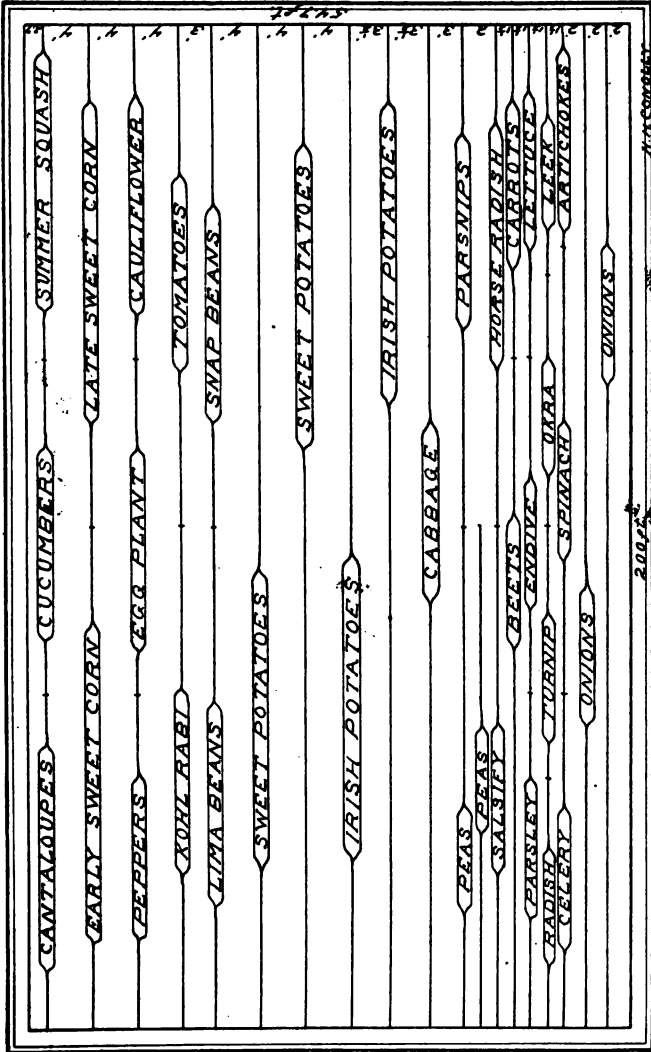
it will be convenient, and should be where the soil is rich and well drained. The size of your garden may be anywhere from ten feet square to an acre, but a fourth-acre garden is large enough to supply fresh vegetables for the average-sized family.

After selecting your garden spot you should plow it to a depth of eight or ten inches, and then pulverize the soil by the use of a disc and harrow. The best time to plow is in the late fall or the early spring. A good coating of barnyard manure should be put on the land before it is plowed.

When the soil is smoothed down with the harrow or leveler, you are ready to mark off the rows. Have a couple of pegs and some heavy twine to make a line so that you can lay off straight rows.

That you may better tell how to plan your garden and where to plant the different vegetables, I have drawn the plan shown on page 209. You need not have your garden exactly like this one, but this may suggest ideas.

Of course you will want some asparagus. Near the edge of the garden, by the fence, spread some manure and spade the ground deep, afterwards cutting it up fine. Get twenty or twenty-five good one-year-old roots and plant them in holes three feet apart, covering so that the tops of the roots are eight inches deep. Keep the earth worked around the plants, and do not cut the sprouts for two years. Put a great deal of manure around the plants every year after cutting, and a little nitrate of soda around them before cutting in the spring. The best time to plant asparagus is in December or late January or February.



PLAN OF THE VEGETABLE GARDEN

The best varieties are "Palmetto" and "Colossal." Your asparagus bed will be good for years if well cared for.

You will also want some radishes, and these can be planted in early spring. Mark some rows with a stick and scatter the seed along these rows about a half inch apart, covering one inch deep. "First and Best," "New



BEANS ARE A GOOD CROP TO RAISE

Perfection," "French Breakfast," "Icicle," and "Long Scarlet Short Top," are some of the best varieties.

Lettuce; endive, salsify, parsnips, beets, carrots, and parsley may all be planted at the same time as radishes, and in the same way, but they will need to be thinned when they begin to grow.

Peas may be planted in a row, putting the seed an inch or two apart and planting from one to one and a half inches deep. You should plant peas in early spring before frost is over, and follow later by other sowings to give a succession.

Snap beans are also a good crop to raise, and none of your gardens should be without them. They may be planted when the frost is over in the spring. Plant in a row, dropping the beans every four or five inches, and covering to a depth of from one and a half to two inches. You may plant several different kinds, such as bush Limas, pole beans, and pole Limas. Plant the pole beans from two to three feet apart in hills, with from three to four beans in each hill.

Cabbage is also good to plant in any garden, but the plants should be started in a hotbed and then transplanted to the garden. Set plants in January or February, putting them about eighteen inches apart in the row. Cauliflower, egg plants, peppers, kohlrabi, and tomatoes should be started in hotbeds from seed, and after they are about four to six inches high should be transplanted to the garden. Egg plants, peppers, and tomatoes should not be set out until April, or until all danger of frost is over.

Be sure to plant Irish potatoes and sweet potatoes. The cut Irish potatoes for planting are placed in a furrow three or four inches deep and fourteen inches apart. With sweet potatoes, you should raise the plants and set them fourteen inches apart on a slight ridge.

Cucumbers, cantaloupes, and summer squash are vines, and the seed should be planted in hills three or four feet apart. Do not plant till danger of frost is over. Sweet corn can be planted in the same way and at the same time.

Be sure to raise some onions, for a garden without onions would not be complete. The best way to plant

them is to get onion sets and set them out in January or February. Put the sets three or four inches apart, and keep them well cultivated.

You now understand planting nearly every one of the common vegetables. If you prepare your ground thor-



CHILDREN WITH FLOWERS AND VEGETABLES RAISED IN THEIR GARDENS

oughly, have it rich, and plant your seed at the right time and in the proper manner, keeping the garden worked to give it a loose surface and to keep the weeds from growing, I think you will have a large crop. The joy, health, and knowledge that you will get from your garden will more than pay for the work you will have to do.

— H. M. CONOLLY.

II

The Hotbed

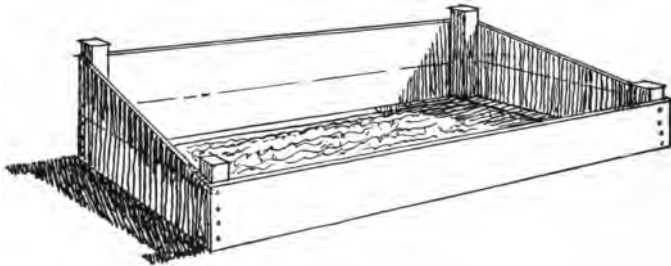
In cases where it is desirable to start certain tender plants before the warm spring weather begins, it may be necessary to plant the seed either in boxes that may be kept indoors in sunny windows, or else in a hotbed.

The hotbed should be located on a rather elevated, well-drained piece of soil, and should be protected, if possible, from a northern exposure by a windbreak such as a fence or a building. The frame of the bed should slope to the south or to the southeast.

Strong posts should be put down at each corner of the hotbed. Any ordinary lumber may be used to build the ends and sides of the frame. The north side, or the rear of the hotbed, should be from ten to twelve inches high, with the soil banked up against it to carry off the water. The south side, or front, should be from six to eight inches high. In most cases it will not be necessary to use glass for a covering, as a good, strong piece of cloth, such as canvas, will be all that is necessary for a cover on cold days. This canvas should be arranged to roll up so that the plants may be sunned. In most cases it is best to dig the pit inside the frame a few inches smaller than the frame. This pit should be from eighteen to twenty-four inches deep.

On the bottom of the pit there should be placed a layer of some coarse, non-conducting material, such as leaves or leaf mold, to prevent the manure from coming in direct contact with the cold ground. This layer should be from two to three inches deep.

Fresh horse manure should be placed in the bed to a depth of from twelve to eighteen inches. This manure should come directly from the barn where it has not been exposed. It is better to have manure that is free or almost free from straw or other bedding. If the manure is very dry, it should be moistened as it is placed in the pit. The manure should be placed in the pit in layers from two to four inches thick, and each layer should be



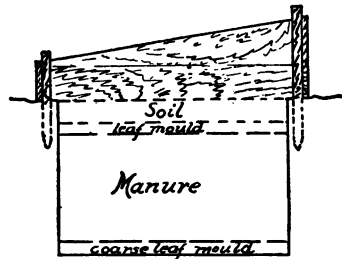
LOOKING DOWN ON THE HOTBED

carefully packed before the next is put in. Each day, for several days, the temperature should be noted, the manure well mixed, packed, and watered down. As soon as the manure is placed in position it will begin to ferment rapidly and to generate a considerable amount of heat.

On top of the manure should be a layer about two inches thick of leaf mold so that the warmth arising from the manure will be evenly distributed over the entire surface. On top of this layer of leaf mold should be placed from four to five inches of one part leaf mold and two parts of good, rich garden soil in which to plant the seed.

In two or three days after filling, the temperature of the bed will drop below ninety degrees, and then such plants as require a high temperature at first should be planted. When the temperature drops to between seventy and eighty degrees, the plants that germinate best at a lower degree of temperature may be planted.

The top soil should be well mixed and finely pulverized before the seeds are planted. In stirring this soil it is important not to go deeper than the layer of planting soil, as it would not be desirable to mix up the top layer of leaf mold or the manure with the surface planting soil.



CROSS SECTION OF HOTBED

All seeds may be planted in rows a few inches apart. As the plants begin to grow they may be thinned so as to be given the chance to get strong and healthy. In watering the plants in the hotbed it is better to wet the soil thoroughly occasionally than to apply small quantities of water frequently.

Transplant from the hotbed to the open field when the plants are large enough and when the temperature will permit.

A cold frame may be made in the same manner as the hotbed, except that there is no bottom heat. Make the frame and the canvas covering and put in the rich garden soil for planting, but leave off the pit and the manure.

HELPS TO STUDY**Word Study.**

co los' sal — very large.

non-con duct'ing — not conveying heat or cold to another object.

fer ment' — work, as yeast.

Notes and Questions. — What is the best location for a home garden? How large should it be? How should the soil be prepared? How should the rows be laid off? Describe the planting and care of asparagus. Describe the planting of radishes. What other vegetables may be planted at the same time as radishes? Describe the planting of peas; snap beans. Name the plants that should be started in hotbeds. What other vegetables should you plant, and when? Describe the making of a hotbed. Draw the design of a garden for your own home. Draw the design of a hotbed. What is the difference between a hotbed and a cold frame?

To the Teacher. — This selection offers the occasion and motive for the organization of a home and school garden club. The whole selection suggests action. The information given should be supplemented by the bulletins on school and home gardening, issued by the U. S. Bureau of Education and by the U. S. Department of Agriculture and the bulletins of the various state agricultural colleges and experiment stations. Your congressman can, perhaps, help you get a package of seeds for every pupil in school. After the home garden is started, the teacher may very profitably pay a visit to the home to see how it is progressing. Recognition of some kind should be given to the boy or girl who raises the best home garden.

Flowers should have a place with vegetables in this work. Schools in some sections of the country have built hotbeds and cold frames, and have helped to provide whole communities with early plants.



THE COMING OF SPRING

It was far in January, and all day the snow was pelting down, but toward evening it grew calm. The sky looked as if it had been swept, and had become more lofty and transparent. The stars looked as if they were quite new, and some of them were amazingly bright and pure. It froze so hard that the snow creaked, and the upper rind of snow might well have grown hard enough to bear the sparrows in the morning dawn. These little birds hopped up and down where the sweeping had been done; but they found very little food, and were not a little cold.

“Peep!” said one of them to another; “they call this a new year, and it is worse than the last! We might just as well have kept the old one. I’m dissatisfied, and I’ve a right to be so.”

"Yes; and the people ran about and fired off shots to celebrate the new year," said a little shivering sparrow; "and they threw pans and pots against the doors, and were quite boisterous with joy, because the old year was gone. I was glad of it, too, because I hoped we should have had warm days; but that has come to nothing — it freezes much harder than before. People have made a mistake in reckoning the time!"

"That they have!" a third put in, who was old, and had a white poll; "they've something they call the calendar — it's an invention of their own — and everything is to be arranged according to that; but it won't do. When Spring comes, then the year begins, and I reckon according to that."

"But when will Spring come?" the others inquired.

"It will come when the stork comes back. But his movements are very uncertain, and here in towns no one knows anything about it; in the country they are better informed. Shall we fly out there and wait? There, at any rate, we shall be nearer to Spring."

And away they flew.

Out in the country it was hard Winter, the snow creaked, and the sparrows hopped about in the ruts, and shivered. "Peep! when will Spring come? It is very long in coming!"

"Very long," sounded from the snow-covered hill, far over the field. It might be the echo which was heard; or perhaps the words were spoken by yonder wonderful old man, who sat in wind and weather high on a heap of snow.

"Who is that old man yonder?" asked the sparrows.

"I know who he is," quoth an old raven, who sat on the fence rail. "It is Winter, the old man of last year. He is not dead, as the calendar says, but is guardian to little Prince Spring, who is to come. Yes, Winter bears sway here. Ugh! the cold makes you shiver, does it not, you little ones?"

"Yes. Did I not tell the truth?" said the smallest sparrow; "the calendar is only an invention of man, and is not arranged according to Nature! They ought to leave these things to us who are born cleverer than they."

And one week passed away, and two passed away. The sunbeam glided along over the lake, and made it shine like burnished tin. The snowy covering on the field and on the hill did not glitter as it had done; but the white form, Winter himself, still sat there, his gaze fixed unswervingly upon the south. He did not notice that the snowy carpet seemed to sink as it were into the earth, and that here and there a little grass-green patch appeared, and that all these patches were crowded with sparrows.

"Kee-wit! kee-wit! Is Spring coming now?"

"Spring!" The cry resounded over field and meadow, and through the black-brown woods, where the moss still glimmered in bright green upon the tree trunks, and from the south the first two storks came flying through the air.

— HANS CHRISTIAN ANDERSEN.

HELPS TO STUDY

Word Study.

rind — the outer covering or coat.

bois'ter ous — noisy.

reck'on ing — counting.

poll — head.

stork — a large wading bird, having long legs and a long pointed bill.

rut — a track worn by a wheel.

ech'o — the repetition of a sound caused by reflection.

quoth — said.

ra'ven — a large black bird similar to the crow.

guard'i an — one who protects or looks after another.

bur'nished — polished.

un swerv'ing ly — without wandering.

re sound'ed — sounded loudly.

Notes and Questions. — Tell how the stars looked after the snowstorm. Why did the little sparrows complain? How had the people celebrated the new year? When does the new year begin? When did the sparrows say it should begin? What was the first sign to them of the beginning of spring? Why did they go to the country? What caused the lake to shine like burnished tin? What became of the snowy carpet? What appeared in little patches? What came from the south to announce spring? What are the first signs of spring that you notice? What is meant by saying that the winter is "guardian to little Prince Spring"?

THE SOUTH WIND AND THE SUN

O the South Wind and the Sun!
How each loved the other one —
Full of fancy — full of folly —
Full of jollity and fun!
How they romped and ran about,
Like two boys when school is out,
With glowing face and lispng lip,
Low laugh, and lifted shout!

And the South Wind — he was dressed
With a ribbon around his breast
That floated, flapped, and fluttered
In a riotous unrest;
And a drapery of mist,
From the shoulder to the wrist
Flowing backward with the motion
Of the waving hand he kissed.

And the sun had on a crown
Wrought of gilded thistledown,
And a scarf of velvet vapor,
And a raveled-rainbow gown;
And his tinsel-tangled hair,
Tossed and lost upon the air,
Was glossier and flossier
Than any anywhere.

And the South Wind's eyes were two
Little dancing drops of dew,

And he puffed his cheeks, and pursed his lips,
 And blew and blew and blew!
 And the Sun's — like diamond-stone —
 Brighter yet than ever known,
 And he knit his brows and held his breath,
 And shone and shone and shone!

And this pair of merry fays
 Wandered through the summer days;
 Arm-in-arm they went together
 Over heights of morning haze —
 Over slanting slopes of lawn
 They went on and on and on,
 Where the daisies looked like star-tracks
 Trailing up and down the dawn.

— JAMES WHITCOMB RILEY.

From "Afterwhiles." Copyright 1887, 1898. Used by permission of The Bobbs-Merrill Company.

HELPS TO STUDY

Word Study.

jol'li ty — merriment.

ri'ot ous — noisy, disorderly.

tinsel-tangled hair — the rays of the sun.

pursed his lips — puckered up his lips.

fay — fairy.

haze — mist.

Notes and Questions. — Why does the poet think of the South Wind and the Sun as companions or partners? What line in the poem suggests that the South Wind brings moisture and rain? What line suggests breezes blowing? Describe in your own words

the sun as the poet sees it. Do you think his description is a good one? Which stanza in the poem do you like best? Why? What is meant by "raveled-rainbow gown"? Find out all you can about James Whitcomb Riley. Read other poems by him.

IN THE SPRING

Showers of rain fall warm and welcome,
Plants lift up their heads rejoicing.
Back unto their lakes and marshes
Come the wild goose and the heron,
Homeward shoots the arrowy swallow,
Sing the bluebird and the robin.
And where'er my footsteps wander,
All the meadows wave with blossoms,
All the woodlands ring with music,
All the trees are dark with foliage!
Comes the spring with all its splendor,
All its birds and all its blossoms,
All its flowers and leaves and grasses.
And the air grows warm and pleasant.

— HENRY W. LONGFELLOW.

From the "Song of Hiawatha."



A HURRICANE

McIlwain

A HURRICANE

The weather was pleasant, and I thought it not warmer than usual at that season. My horse was jogging along quietly, and my thoughts were, for once at least in my life, entirely engaged in commercial speculations.

I had forded Highland Creek, and was on the eve of entering a tract of bottom land, or valley, that lay between it and Canoe Creek, when suddenly I remarked a great difference in the aspect of the heavens. A hazy thickness overspread the country, and I for some time expected an earthquake; but my horse exhibited no propensity to stop and prepare for such an occurrence. I had nearly arrived at the verge of the valley, when I thought fit to stop near a brook, and dismounted to quench the thirst that had come upon me.

I was leaning on my knees, with my lips about to touch the water, when, from my proximity to the earth, I heard a distant murmuring sound of an extraordinary nature. I drank, however, and as I rose on my feet, looked toward the southwest, when I observed a yellowish oval spot, the appearance of which was quite new to me.

Little time was left me for consideration, as the next moment a smart breeze began to agitate the taller trees. It increased to an unexpected height, and already the smaller branches and twigs were seen falling in a slanting direction toward the ground. Two minutes had scarcely elapsed, when the whole forest before me was in fearful motion. Here and there, where one tree pressed against another, a creaking noise was produced, similar to that

occasioned by the violent gusts which sometimes sweep over the country.

Turning instinctively toward the direction from which the wind blew, I saw, to my great astonishment, that the noblest trees of the forest bent their lofty heads for a while, and, unable to stand against the blast, were falling to pieces. So rapid was the progress of the storm, that before I could think of taking measures to insure my safety, the hurricane was passing opposite the place where I stood.

The tops of the trees were seen moving in the strangest manner, in the central current of the tempest, which carried along with it a mingled mass of twigs and foliage that completely obscured the view. Some of the largest trees were seen bending and writhing under the gale; others suddenly snapped across, and many, after a momentary resistance, fell uprooted to the earth.

The mass of branches, twigs, foliage, and dust that moved through the air was whirled onwards like a cloud of feathers, and, on passing, disclosed a wide space filled with fallen trees, naked stumps, and heaps of shapeless ruin which marked the path of the tempest.

This space was about a fourth of a mile in breadth, and to my imagination resembled the dried-up bed of the Mississippi, with its thousands of planters and sawyers strewed in the sand and inclined in various degrees. The horrible noise resembled the great cataract of Niagara, and, as it howled along in the track of the desolating tempest, produced a feeling in my mind which it is impossible to describe.

— JOHN JAMES AUDUBON.

HELPS TO STUDY

Biographical. — John James Audubon was born in New Orleans in 1780. Much of his life was spent in the forests of the United States studying the habits of birds. He was a close observer and a great lover of nature.

Word Study.

com mer'cial spec u la'tions — thoughts of business.

was on the eve of — was about to.

re marked' — noticed.

as'pect — appearance.

pro pen'si ty — natural desire.

oc cur'rence — happening, event.

verge — the edge or end.

prox im'i ty — nearness.

o'val — egg-shaped.

ag'i tate — to shake.

e lapsed' — passed.

in stinct'ive ly — warned by a natural, unreasoning impulse.

ob scured' — shut out, made invisible.

writh'ing — twisting.

mo'men ta ry — lasting a moment.

planters and sawyers — trees and stumps in the bed of a river.

Notes and Questions. — What caused the author to expect an earthquake? How does a horse prepare for an earthquake? Give a description of the forest during a storm. What marked the path of the storm? In what respect did the author think this space resembled the dried-up bed of the Mississippi?

Describe the movement and effects of the small whirlwind which you frequently see on a hot summer day. Compare the hurricane described by Audubon with the whirlwind. In what respects are they alike? Do you suppose they have similar causes?

AFTER THE RAIN

The cock is crowing,
The stream is flowing,
The small birds twitter,
The lake doth glitter,
The green field sleeps in the sun ;
The oldest and youngest
Are at work with the strongest ;
The cattle are grazing,
Their heads never raising ;
There are forty feeding like one !

Like an army defeated
The snow hath retreated,
And now doth fare ill
On the top of the bare hill ;
The plowboy is whooping — anon — anon :
There's joy in the mountains ;
There's life in the fountains ;
Small clouds are sailing,
Blue sky prevailing ;
The rain is over and gone !

— WILLIAM WORDSWORTH.

HELPS TO STUDY

Biographical. — William Wordsworth was born in 1770 in the beautiful highlands of England and died at his home at Rydal Mount, England, in 1850. His poems deal with the simple, common things of life and are expressed in simple, beautiful language.

Word Study.

doth — does.

hath — has.

re treat'ed — withdrawn, gone away.

fare ill — to be in an unfortunate condition.

whoop'ing — shouting joyously.

a non' — again.

foun'tain — a spring of water; sometimes an artificial jet or stream of water.

pre vail'ing — overcoming.

Notes and Questions. — What time of the year does the poem suggest? What causes the lake to glitter? What is meant by "the green field sleeps in the sun"? What indicates the eagerness of the cattle to eat the fresh grass? In cold climates when does the snow melt? In what way does the plowboy express delight over the return of spring? What were the signs of joy in the mountain? Describe the appearance of the sky after the rain. Explain the meaning of "there are forty feeding like one." Explain "doth fare ill on the top of the bare hill."

MARCH AND APRIL

March is a boist'rous fellow,
 And undeterred by fear,
 With many pranks proclaims himself
 The tomboy of the year!

Sweet April is his sister —
 Her eyes are often dim —
 Pained by the thought that he is dead
 She sheds her tears for him.

— WILLIAM HAMILTON HAYNE.



THE BOY WHO HATED TREES

I

“Good night, Dick. Remember now, to wake up with the robins, so that you may be ready to help me set out our new trees.”

“Good night,” answered Dick in a sulky tone, for Dick was cross.

“Trees, trees, trees!” he mumbled to himself as he began to undress. “I’m so sick of hearing about trees. Miss Morrell has talked ‘trees’ for a week at school, and now father has bought some old twigs to set out tomorrow, and I want to go fishing.

"I wish I lived in a land where there were no trees. We could get along well enough without them." And with this thought he jumped into bed.

Dick had been asleep perhaps an hour or more, when he heard a queer rustling noise, and then a voice called out, "Here he is — the boy who hates trees!"

There was the strangest procession coming toward him. It was made up of trees of all kinds. The Pine and the Elm came first; the Maple and the Oak followed: the Maple's leaves were flushed scarlet, she was so excited. The Willow was weeping, and the Poplar was trembling all over.

Next came all the fruit trees, led by the Cherry, while the Walnut, the White Birch, and the Palm were behind.

What did it all mean? Dick was frightened for a moment. It seemed as if every tree of which he had ever heard were there, and he wondered how the room could hold them all.

When they had all grown quiet, the Pine said: "Dear brothers and sisters, here is a boy who hates trees; he cannot see that we are of any use. It is more than I can stand, and I have called this meeting to see what can be done about it. Has any one anything to say?"

The Cherry looked very sour. "I cannot see that *boys* are of any use," she said. "Many years ago, when cherry trees were scarce in this country, a boy named George cut down my great-grandfather just to try his new hatchet."

"And boys know so little," said the White Birch; "they are always hacking me with knives and taking off my coat, no matter how cold the weather is.

"I loved a boy once, but it was many years ago. He was a little Indian boy. He loved trees. I remember how he stood beside me one warm day and said :

"Give me of your bark, O Birch Tree!
For the summer time is coming,
And the sun is warm in heaven,
And you need no white skin wrapper."

"Then he took off my bark so carefully that he did not hurt me a bit. But he is not living now. This boy is not like him."

"I don't like boys, either," spoke up the Apple. "One day a boy climbed up into my branches and broke off one of my limbs. He was a very silly boy, for he wanted green apples. Had my fruit been ripe, I would have tossed one down to him. How happy we should be if it were not for boys!"

The Maple was very angry. "This boy said we were of no use, but it was only this morning that I heard him tease his grandmother for a cake of my sugar."

"He ate it as if he liked it, too," said the Palm. "I saw him; he was fanning himself with one of my leaves."

The Willow wiped her eyes. "Boys, boys, boys!" she said; "I'm so sick of boys! This same boy made a whistle out of one of my children this very night, when he went for the cows."

Then a queer tree in a corner spoke in a thick voice. "We are of no use, are we? If it were not for me, where would he get the tires for his bicycle? There are his rubber boots, too. Why, he uses me every day about something. But I've thought of a plan."

The trees crowded around him, talking together excitedly.

"But how shall we do it?" Dick heard them say.

"Oh," said the Elm, "the Wind will help us. He is our friend."

II

Before Dick could cry out, he found himself being carried away by the Wind.

"Where am I going?" he called.

"To the land of no trees," they answered; and they bowed and even the Willow held up her head long enough to call, "Good-by! Good-by!" And then home and trees were left far behind.

How fast the Wind traveled! On and on they rushed, until suddenly the Wind dropped him and went whistling away.

Dick felt frightened when he found himself all alone.

"Oh, I'm so hot!" he exclaimed. "I wonder where I am."

Certainly he had never before been in such a place.

There were no trees nor green grass anywhere in sight. As far as he could see, there was only sand — white sand, that was very hot and scorching.

"It seems to me I've seen pictures in my geography like this," he said to himself. "It must be a desert. Oh, I was never so hot before. I can't stay here. What shall I do?"

All at once he noticed a tiny speck far away in the distance. Now it looked larger. He brushed away something that looked very much like a tear, though

he told himself that it was only because he was so warm.

Yes, that speck surely moved, and was coming nearer. What if it were a bear!

“There is no tree to climb, and I cannot run — I am so tired, and it is very hot.”

Nearer and nearer it came, moving slowly. Dick watched it with a beating heart. At last he saw that it was not a single animal, but a great many in line.

“Oh, they are camels!” he cried. “Yes, I know they are. Once at a circus I saw some that looked just like them — but what queer looking men are on them!”

They were now very near him, and one of the men beckoned with his hand and said something.

“I can’t understand him,” said Dick to himself, “but I suppose he means he’ll give me a ride.”

The man helped him up and they journeyed on. After a time Dick grew very tired even of riding.

“The camel joggles me so,” he said, “and I am so thirsty I shall die. If they would only stop a minute!”

What was the matter? What were they saying? Each man was bowing himself toward the ground and waving his hand.

“I don’t see what they are making all that fuss about. I can’t see anything, the sun hurts my eyes so.” And Dick covered his eyes with his hand.

Suddenly there was a shout, and the camels stood still. Dick lifted his head. Could he believe his eyes? Right before him was a spot of green grass, a spring of cool water, and one of those things he hated — a tree.

Hate a tree? He thought that he had never seen anything so beautiful in all his life.

He fairly tumbled off the camel in his haste to reach it. The tears ran down his face as he threw his arms around its trunk.

"Dear tree!" he cried.

"Dick, Dick, are you going to help me plant the new trees?" called his father.

Opening his eyes, Dick found himself in his own little room, both hands clasping his pillow.

Dick was soon dressed and downstairs, and so anxious was he to plant trees that he could hardly eat his breakfast.

A week later Miss Morrell said to one of the other teachers: "I think the trees that we planted on Arbor Day will grow if good care has anything to do with it. Dick Hawkins seems to have taken charge of them all."

In just one night he had learned to see
The wonderful beauty there is in a tree.

— ALICE L. BECKWITH.

From "Stories of Garden and Field." Published by Educational Publishing Company.

HELPS TO STUDY

Word Study.

sul'ky — cross, ill natured.

mum'ble — to speak in a low, indistinct voice.

pro ces'sion — parade in ranks.

des'ert — a dry expanse of sand.

Notes and Questions. — What did Dick's father wish him to do? How did Dick feel about it? What time of the year was it? Tell Dick's dream. Who was the boy that cut the cherry tree to try his new hatchet? What did the little Indian boy, Hiawatha, do with the bark from the birch tree? What do we get from the maple? Of what use is the palmetto tree? What tree furnishes material to make rubber tires, boots, etc.? How was Dick punished by the trees? What is a "spot of green, a cool spring, and a tree" in a desert called? How did Dick regard trees after his dream?

I REMEMBER

I remember, I remember
The roses red and white,
The violets and the lily-cups,
Those flowers made of light;
The lilacs, where the robin built,
And where my brother set
The laburnum on his birthday, —
The tree is living yet.

—THOMAS HOOD.

THE SUGAR-PLUM TREE

Have you ever heard of the Sugar-Plum Tree?

'T is a marvel of great renown!

It blooms on the shore of the Lollipop sea

In the garden of Shut-Eye Town;

The fruit that it bears is so wondrously sweet

(As those who have tasted it say)

That good little children have only to eat

Of that fruit to be happy next day.

When you've got to the tree, you would have a hard time

To capture the fruit which I sing;

The tree is so tall that no person could climb

To the boughs where the sugar-plums swing!

But up in that tree sits a chocolate cat,

And a gingerbread dog prowls below —

And this is the way you contrive to get at

Those sugar-plums tempting you so:

You say but the word to that gingerbread dog

And he barks with such terrible zest

That the chocolate cat is at once all agog,

As her swelling proportions attest.

And the chocolate cat goes cavorting around

From this leafy limb unto that,

And the sugar-plums tumble, of course, to the ground —

Hurrah for that chocolate cat!



SUGAR PLUM TREE

There are marshmallows, gumdrops, and peppermint
 canes,
 With stripings of scarlet or gold,
 And you carry away of the treasure that rains
 As much as your apron can hold!
 So come, little child, cuddle closer to me
 In your dainty white nightcap and gown,
 And I'll rock you away to that Sugar-Plum Tree
 In the garden of Shut-Eye Town.

— EUGENE FIELD.

From "Poems of Eugene Field." Copyright, 1910. Published by Charles Scribner's
 Sons.

HELPS TO STUDY

Biographical. — Eugene Field was born in St. Louis in 1850, but moved to New England in early life. After leaving there he went to Chicago, writing for newspapers and writing poems. He was very fond of children and carried candy in his pockets for his little friends. He was also fond of pets and dolls and had a collection of both. His best poems are about children and child life.

Word Study.

sugar-plum — a piece of candy.

mar'vel — wonder.

re noun' — reputation.

con trive' — to plan or find a way.

zest — pleasure.

a gog' — eager.

at test' — give proof of.

ca vort'ing — jumping.

Notes and Questions. — What is another name for Shut-Eye Town? What kind of trees do we have in that town? Describe what happens in those trees. What is the meaning of this poem?

HOW TO PLANT A TREE

Dig the hole wider and deeper than the tree requires. If the tree just fits into the socket the tips of the roots will meet a hard wall which they are too delicate to penetrate, hold fast to, or feed in.

Be sure that the surface soil is hoarded at one side when the hole is dug. This soil is mellow and full of plant food. The under soil is harder and more barren. Some rich garden soil can well be brought over and used instead of the subsoil.

Take up as large a root system as possible with the tree you dig. The smaller the ball of earth, the greater the loss of feeding roots and the danger of starvation to the tree.

Trim all torn and broken roots with a sharp knife. A ragged wound below or above the ground is slow and uncertain in healing. A clean, slanting cut heals soonest and surest.

Set the tree on a bed of mellow soil with all its roots spread naturally.

Let the level be the same as before. The tree's roots must be planted, but not buried too deep to breathe. A stick laid across the hole at the ground level will indicate where the tree "collar" should be.

Sift rich earth, free from clods, among the roots. Hold the tree erect and firm; lift it a little to make sure the spaces are well filled underneath. Pack it well down with your foot.

If in the growing season, pour in water and let it settle away. This establishes contact between root hairs and soil particles, and dissolves plant food for absorption. If the tree is dormant, do not water it.

Fill the hole with dirt. Tramp in well as filling goes on. Heap it somewhat to allow for settling. If subsoil is used, put it on last. Make the tree perfectly firm in its place.

Prune the top to a few main branches and shorten these. This applies to a sapling of a few years whose head you are able to form. Older trees should also be pruned to balance the loss of roots. Otherwise transpiration of water from the foliage would be so great as to overtax its roots, not yet established in the new place. Many trees die from this abuse. People cannot bear to cut back the handsome top, though a handsomer one is soon supplied by following this reasonable rule.

Water the tree frequently as it first starts. A thorough soaking of all the roots, not a mere sprinkling of the surface soil, is needed. Continuous growth depends on moisture in the soil. Drainage will remove the surplus water.

Keep the surface soil free from cakes or cracks. This prevents excessive evaporation. Do not stir the soil deep enough to disturb the roots. Keep out grass and weeds.

— JULIA E. ROGERS.

HELPS TO STUDY

Word Study.

sock'et — an opening into which anything is fitted.

pen'e trate — to pierce into, enter.

hoard'ed — laid up, treasured.

bar'ren — dry, unproductive.

sub'soil — the bed of earth which lies immediately beneath the surface soil.

con'tact — a touching, a meeting.

ab sorp'tion — the act of sucking in anything.

dor'mant — sleeping, applied to plants in winter when they are unproductive.

pruned — trimmed correctly.

trans pi ra'tion — the act of throwing off in the form of vapor.

over tax' — to tax too heavily.

a buse' — improper treatment.

sur'plus — more than enough.

ex ces'sive — overmuch.

Notes and Questions. — Why should the hole be deeper and wider than the tree? What kind of soil is best to fill the hole with? Why should care be used to get as large a root system as possible? How should torn or broken roots be trimmed? Describe the way a tree should be set into the bed. When should it be well watered? What is meant by a tree being dormant? How should the tree be pruned? Why is pruning necessary? Why should the soil be kept free from cracks or cakes?

To the Teacher. — Celebrate Arbor Day by planting trees at the school or at home according to the directions given. Wouldn't it be a good idea to start a forest plot at school by planting tree seeds and furnishing young trees for the homes of the school district?

PLANT A TREE

He who plants a tree,
Plants a hope.
Rootlets up through fibers blindly grope ;
Leaves unfold into horizons free.
So man's life must climb
From the clods of time
Unto heavens sublime.
Canst thou prophesy, thou little tree,
What the glory of thy boughs shall be ?

He who plants a tree,
Plants a joy ;
Plants a comfort that will never cloy ;
Every day a fresh reality,
Beautiful and strong,
To whose shelter throng
Creatures blithe with song.
If thou couldst but know, thou happy tree,
Of the bliss that shall inhabit thee !

He who plants a tree, —
He plants peace.
Under its green curtains jargons cease.
Leaf and zephyr murmur soothingly ;
Shadows soft with sleep
Down tired eyelids creep,
Balm of slumber deep.

Never hast thou dreamed, thou blessed tree,
Of the benediction thou shalt be.

He who plants a tree, —
He plants youth ;
Vigor won for centuries in sooth ;
Life of time, that hints eternity !
Boughs their strength uprear ;
New shoots, every year,
On old growths appear.
Thou shalt teach the ages, sturdy tree,
Youth of soul is immortality.

He who plants a tree, —
He plants love ;
Tents of coolness spreading out above
Wayfarers, he may not live to see.
Gifts that grow are best ;
Hands that bless are blest ;
Plant ! life does the rest !
Heaven and earth help him who plants a tree,
And his work its own reward shall be.

— LUCY LARCOM.

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HELPS TO STUDY

Biographical. — Lucy Larcom (1826–1893) was a self-made woman. While working in a mill in Lowell, Massachusetts, she started a little paper. Her poetry was admired by Whittier, who became her friend. As reading books in the mill was forbidden, she pasted poems clipped from newspapers on her window sill and these she committed to memory. At last she had an opportunity to attend school, and after her graduation she taught in a seminary. Her poems testify to her love of God and nature.

Word Study.

root'lets — little roots.

fi'bers — threadlike substances.

grope — to search out by feeling in the dark.

ho ri' zon — the line where the earth and sky appear to meet.

sub lime' — high above, lofty.

proph'e sy — to foretell.

a comfort that will never cloy — a comfort of which one will never tire.

re al'i ty — fact, truth.

jar'gon — a confused, disturbing babbling.

zeph'yr — a soft, gentle breeze.

balm — anything that is healing.

ben e dic'tion — a blessing.

in sooth — in truth, in reality.

e ter'ni ty — endlessness.

im mor tal'i ty — unending existence, living always.

Notes and Questions. — Read the first two lines of each stanza. Are these good reasons why we should plant trees? What comparison is made in the first stanza? In the second stanza what use of the tree is given? What picture do you see in the third stanza? What lesson does the "sturdy tree" teach? What kind of "gifts are best"? Compare the poem with the prose selection which follows. Find in the two different expressions the same thought. Do you think of a good reason why a man should plant a tree even if he does not expect to eat the fruit or enjoy its shade?

HE WHO PLANTS A TREE

There is fine patience and broad charity in the man who plants a tree. No single action better typifies the real purpose of our living.

From the first the tree has furnished man with shelter and fuel. Under its leafy dome the greatest charter of human rights has been signed; the world's greatest treaties have there been written; and the surrender of great armies has been concluded there. But for the tree, human history would be a thin tale soon told.

Beneath the tree the weary have rested and found strength and hope; there lovers have trysted ever since love first illumined the world; there our first parents were tempted and lost paradise, and there children have played and restored it; to the soothing shade man ever has turned from his troubles and found calm and peace.

He who plants a tree may never enjoy its shade or gaze upon its full-grown splendor; but he is doing what he can to make the world a wholesomer and happier dwelling place for those who come after him.

He who plants a tree plants shade, rest, love, hope, peace, for troubled ones who will come his way when he is gone.

There is nothing in which God asks so little of us, and gives so much, as in the planting of a tree. He gives the soil, the seed, the moisture, the sunshine, the air — yes, and the selfless impulse to do our little part of just planting it.

— CHARLES GRANT MILLER.

From "Country Life," Sept. 1910. By permission, Doubleday, Page & Co.

HELPS TO STUDY

Word Study.

char'i ty — love and good will.

typ'i fies — represents.

dome — a rounded covering or roof.

char'ter — a written paper granting stated rights.

trea'ties — agreements between nations.

tryst'ed — met by agreement.

il lu'mined — lighted.

par'a dise — a place of happiness.

whole'som er — healthier.

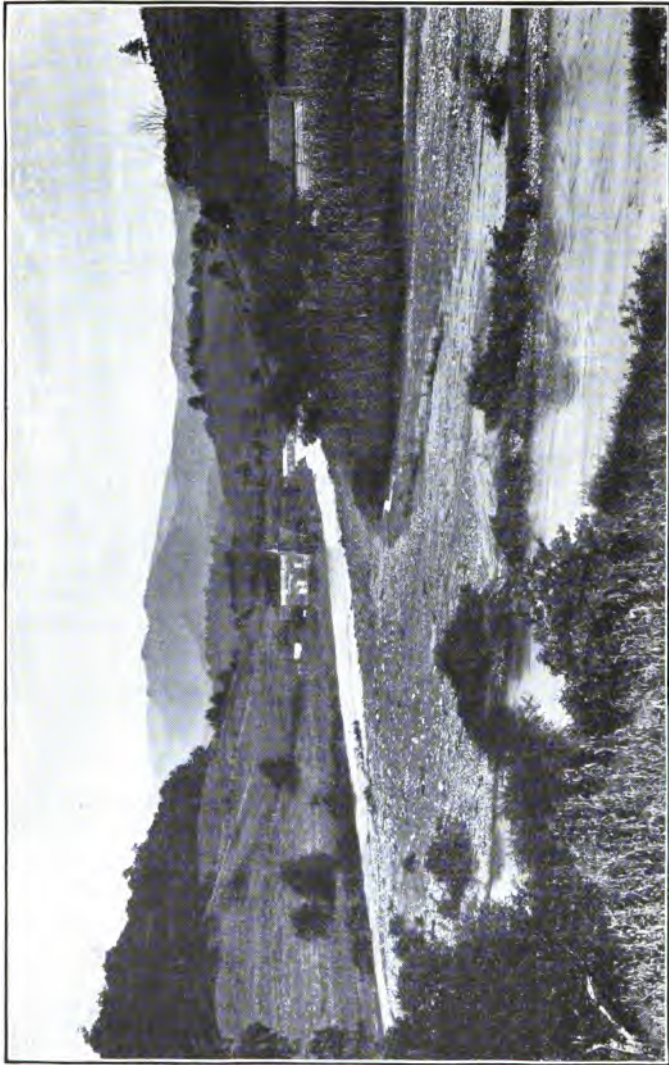
self'less — unselfish.

Notes and Questions. — What does the tree furnish man? Name some important events that have taken place under trees. How does the planting of trees benefit mankind? What does the author say he who plants a tree plants? Why is it so easy for us to do our part in planting trees?

UNDER THE GREENWOOD TREE

Under the greenwood tree,
Who loves to lie with me,
And tune his merry note
Unto the sweet bird's throat?
Come hither, come hither, come hither;
Here shall we see
No enemy
But winter and rough weather.

— WILLIAM SHAKESPEARE.



SOIL REMOVED BY A FRESHET
Showing the result of cutting trees from the hillsides

FOREST TREES

“The groves were God’s first temples.”

Sometimes we do not know and appreciate some of our very best friends until it is too late. The great forest trees are certainly our friends in many ways. They furnish us cool, refreshing shade where we can escape from the heat of the summer sun; they temper the floods for us; they teach us much of the wisdom of nature; and they give us freely of their stored-up wealth.

From a great many trees we get useful articles, including nuts, medicine, lumber, posts, paper, and other valuable things. I think we might well ask ourselves the important question, “What are we going to do for lumber with which to build houses when all of the fine trees are destroyed?”

Forest trees help to decrease the bad effects of floods. If the mountain sides are covered with trees, this means that the soil is full of roots, and that the trees and roots catch and hold the leaves and other refuse. When the heavy rains come, much of the water, instead of rushing away at a rapid rate as it would over cleared land, is held by the leaves till it gradually soaks into the soil. Such of it as does not descend into the soil to feed the roots of plants or the mountain springs, slowly finds its way to the rivers, and so does not swell the streams to sudden and dangerous floods.

There are many countries in the old world, notably, China, India, and Korea, where the people did not know

and appreciate the full value of trees until it was too late. These countries have now become almost treeless, and it is a very difficult matter for the people to get anything to take the place of wood as fuel and as building material.

In our country we have the most magnificent forests in the world and yet we are treating them little better



RESULT OF A FOREST FIRE

than the people of China and India and Korea treated their original forests. Ought we not to do better? Do you not believe that we ought to stop and think of the hundreds of years' growth that it took to perfect the trees? When we ruthlessly cut them down, hundreds of years will be required to remedy the damage that we have so lightly done. Anybody can destroy one of these grand old monarchs of the forest, but who of us can cause

another to grow where we have destroyed one, except with the help of the centuries?

When we start to cut a fine tree, do we always consider whether it is absolutely necessary for us to cut it? When we cut a tree and cause it to fall, do we give any thought at all to the injury it inflicts on smaller trees? I fear that we have never given this matter very careful thought; and that before long we are going to find that we have destroyed our fine forests, and have come to need them badly, after it is too late.

We damage our trees in a great many ways. Setting fire to the leaves and burning over the woods injures the forests greatly. The hot fires, in passing over the woods, kill a great many of the young trees and injure many of the larger ones so that they either die or have great scars left on them. We should be very careful about building fires in the forests. Chopping a tree or striking it with any hard substance makes a wound on it. Such wounds as these are very difficult to heal, and when they are healed over, there



INJURED BY FIRE

may be left on the inside of the tree decayed spots which will do permanent injury. For this reason, we should be very careful about striking a tree with an ax or with any implement that might cut into it or bruise and injure it in any way. Sometimes in building wire fences the wire



DAMAGED BY BEING USED
AS A HITCHING POST

is nailed directly against the body of the tree, and as the tree grows and enlarges, the wire is taken into it and injures it permanently. It would be better if we would fasten a piece of timber alongside the tree and then fasten the wire to the piece of timber.

We should also make it a point to know our friends, the trees. We should study their leaves, limbs, trunks, bark, and root systems. We should learn to know our native trees by name and to understand their peculiarities. We should do all we can to protect them for the sake of the comfort and protection they give to us. And we should remember how easy it is to injure them, and how many years it takes to grow them again.

You have it in your power now to do a genuine service to your country by planting a tree and caring for it until it is big enough to make its own living. Plant trees on your own home ground — shade trees, fruit trees, nut trees, flowering trees. Plant trees on your school

grounds. Plant trees on your public squares and on your streets — with the proper permission and supervision.

HELPS TO STUDY

Word Study.

ap pre'ci ate — know the value of.

tem'per — make less violent.

de crease' — lessen.

ref'use — useless, waste material.

fu'el — something used to produce heat.

ruth'less ly — carelessly, unthinkingly.

mon'arch — a king.

in flicts' on — causes to.

im'ple ment — instrument, tool.

na'tive — belonging to a locality.

gen'u ine — real.

su per vi'sion — oversight, watchful care.

Notes and Questions. — In what way are the forest trees our friends? What are some of the useful articles we get from trees? How do trees prevent floods? Name some countries that are almost treeless. What should we think of before we destroy a tree? What is the danger of forest fires? In what other ways may trees be injured? In many foreign countries the government systematically plants trees and requires a permit before a tree is cut. Do you think this would be a good plan for our country?

A FIRE IN THE FOREST

The following description of a forest fire is taken from "True Bear Stories," written by Joaquin Miller. It describes the terrors and dangers of those destructive fires that sweep through great areas of woodland destroying timber and endangering life. The author, accompanied by two English artists and a party of Indians, is caught in the forests at the base of Mount Shasta.

And now the wind blew past and over us. Bits of white ashes sifted down like snow. Surely the sea of fire was coming, coming right on after us! Still there was no sign save this little sift of ashes, no sound — nothing at all except the trained sense of the Indians and the terror of the "cattle" (this is what the Englishmen called our horses) to give us warning.

In a short time we struck a cañon, that was nearly free from brush and led steeply down to the cool, deep waters of the McCloud River. Here we found the Indians had thrown their loads and themselves on the ground.

They got up in sulky silence and stripping our horses turned them loose; and then, taking our saddles, they led us hastily up out of the narrow mouth of the cañon under a little steep stone bluff.

The sky was black, and thunder made the woods tremble. We were hardly done wiping the blood and perspiration from our torn hands and faces, where we sat, when the mule jerked up his head, sniffed, snorted,

and then plunged headlong into the river and struck out for the deep forest on the farther bank, followed by the ponies.

As we turned our eyes from seeing the animals safely over, right there by us and a little behind us, through the willows of the cañon and over the edge of the water, we saw peering and pointing toward the other side dozens of long black and brown outreaching noses. Elk!

They had come noiselessly; they stood motionless. They did not look back or aside, only straight ahead. We could almost have touched the nearest one. They were large and fat, almost as fat as cows, certainly larger than the ordinary Jersey. The peculiar thing about them was the way, the level way, in which they held their small, long heads — straight out, the huge horns of the males lying far back on their shoulders. And then for the first time I could make out what these horns are for — to part the brush with, as they lead through the thicket, and thus save their coarse coats of hair, which is very rotten and could be torn off in a little time if not thus protected. They are never used to fight with, never; the elk uses only his feet. If on the defense, however, the male elk will throw his nose close to the ground and receive the enemy on his horns.

Suddenly and all together — and perhaps they had only paused a second — they moved on into the water, led by a bull with a head of horns like a rocking-chair. And his rocking-chair rocked his head under water much of the time. The cold, swift water soon broke the line, only the leader making the bank directly before us, while the others drifted far down and out of sight.

Our artists, meantime, had dug up pencil and pad and begun to work. But an Indian jerked aside the saddles on which the Englishmen sat, and the work was stopped. Everything was now packed up close under the steep little ledge of rocks. An avalanche of smaller wild animals, mostly deer, was upon us. Many of these had their tongues hanging from their half-opened mouths. They did not attempt to drink, as you would suppose, but slid into the water silently, almost as soon as they came. Surely they must have seen us, but certainly they took no notice of us. And such order! No crushing or crowding, as you see cattle in corrals, aye, as you see people sometimes in the cars.

And now came a torrent of little creeping things — rabbits, rats, squirrels! None of these smaller creatures attempted to cross, but crept along in the willows and brush close to the water.

They loaded down the willows till they bent into the water, and the terrified little creatures floated away without the least bit of noise or confusion. And still the black skies were filled with the solemn boom of thunder. In fact, we had not yet heard any noise of any sort except thunder, not even our own voices. There was something more eloquent in the air now, something more terrible than man or beast, and all things were awed into silence — a profound silence.

And all this time countless creatures, little creatures and big, were crowding the bank on our side or swimming across or floating down, down, down the swift, wood-hung waters. Suddenly the stolid leader of the Indians threw his two naked arms in the air and let them fall,

limp and helpless, at his side; then he pointed out into the stream, for there embers and living and dead beasts began to drift and sweep down the swift waters from above. The Indians now gathered up the packs and saddles and made a barricade above, for it was clear that many a living thing would now be borne down upon us.

The two Englishmen looked one another in the face long and thoughtfully, pulling their feet under them to keep from being trodden on.

I did not trouble myself to call their attention to an enormous yellow rattlesnake which had suddenly and noiselessly slid down, over the steep little bluff of rocks behind us, into our midst.

But now note this fact — every man there, red or white, saw or felt that huge and noiseless monster the very second she slid among us. For as I looked, even as I first looked, and then turned to see what the others would say or do, they were all looking at the glittering eyes set in that coffin-like head.

The Indians did not move back or seem nearly so much frightened as when they saw the drift of embers and dead beasts in the river before them, but the florid Englishmen turned white! They resolutely arose, thrust their hands in their pockets, and stood leaning their backs hard against the steep bluff. Then another snake, long, black, and beautiful, swept his supple neck down between them and thrust his red tongue forth — as if a bit of the flames had already reached us.

Fortunately, this particular “wisest of all the beasts of the field” was not disposed to tarry. In another

second he had swung to the ground and was making a thousand graceful curves in the swift water for the farther bank.

Meantime a good many bears had come and gone. The bear is a good swimmer and takes to the water without fear. He is, in truth, quite a fisherman; so much of a fisherman, in fact, that in salmon season here his flesh is unfit for food. The pitiful part of it all was to see such little creatures as could not swim clinging all up and down and not daring to take to the water.

Unlike their domesticated brothers, we saw several wildcats take to the water, promptly. The wildcat, you must know, has no tail to speak of. But the panther and California lion are well equipped in this respect and abhor the water.

I constantly kept an eye over my shoulder at the ledge or little bluff of rocks, expecting to see a whole row of lions and panthers sitting there, almost "cheek by jowl" with my English friends, at any moment. But strangely enough, we saw neither panther nor lion; nor did we see a single grizzly among the bears that came that way.

We now noticed that one of the Indians had become charmed by looking too intently at the enormous serpent in our midst. The snake's huge, coffin-shaped head, as big as your open palm, was slowly swaying from side to side. The Indian's head was doing the same, and their eyes were drawing closer and closer together.

An Indian will not kill a rattlesnake. But to break the charm, in this case, they caught their companion by the shoulders and forced him back flat on the ground. And there he lay, crying like a child, the first and only

Indian I ever saw cry. And then suddenly boom! boom! boom! as if heaven burst. It began to rain in torrents.

And just then, as we began to breathe freely and feel safe, there came a crash and bump and bang above our heads and high over our heads, from off the ledge behind us! Over our heads like a rocket, in an instant and clear into the water, leaped a huge black bear, a ball of fire, his fat sides in flame! He sank out of sight, but soon came up, spun around like a top, dived again, then again spun around. But he got across, I am glad to say — and this always pleases my little girl, Juanita. He sat there on the bank looking back at us quite a time. Finally he washed his face, like a cat, then quietly went away.

The rattlesnake was the last to cross. The beautiful yellow beast was not at all disconcerted, but with the serenest dignity lifted her yellow folds, coiled and uncoiled slowly, curved high in the air, arched her glittering neck of gold, widened her body till broad as your two hands, and so slid away over the water to the other side through the wild, white rain. The cloudburst put out the fire instantly, showing that, though animals have superhuman foresight, they don't know everything before the time.

The Indians made their moaning and whimpering friend, who had been overcome by the snake, pull himself together, and they swam across and gathered up the "cattle."

Some men say a bear cannot leap, but I say there are times when a bear can leap like a tiger. This was one of the times.

— JOAQUIN MILLER.

HELPS TO STUDY

Biographical. — Joaquin Miller was born in 1841 in the Wabash District of Indiana. He was for a time a miner in California, and for five years he lived among the Indians of the Pacific Coast. Later he studied law and practiced for seven or eight years in Oregon. The rest of his life was devoted chiefly to writing. His writings breathe the freedom and the wild beauty of the West in the pioneer days.

Word Study.

save — except.

ca'ñon — a valley with steep sides.

av'a lanche — a large falling mass.

cor rals' — pens for cattle.

stol'id — unemotional.

bar ri cade' — an obstruction erected to block passage.

do mes'ti cat ed — tamed.

cheek by jowl — side by side.

Juanita (Wa nee'ta).

dis con cert'ed — confused.

su per hu'man — surpassing human powers.

flor'id — red-faced.

ab hor' — dislike strongly.

se rene' — calm.

Notes and Questions. — Describe the appearance of the elk. Of what use are his horns? What was the effect of the coming of the forest fire on the animals? Why is the serpent called the "wisest of all the beasts of the field"? What can you tell about the snakes? What do you learn about the ways of wild animals from this story? How do forest fires originate? How can they be prevented?



THE BROWN THRUSH

There's a merry brown thrush sitting up in the tree ;
He's singing to me! He's singing to me!
And what does he say, little girl, little boy?

"Oh, the world's running over with joy!

Don't you hear? Don't you see?

Hush! look! in my tree,

I'm as happy as happy can be!"

And the brown thrush keeps singing: "A nest, do
 you see,
 And five eggs, hid by me in the juniper tree?
 Don't meddle! don't touch! little girl, little boy,
 Or the world will lose some of its joy!
 Now I'm glad! now I'm free!
 And I always shall be,
 If you never bring sorrow to me."

So the merry brown thrush sings away in the tree,
 To you and to me, to you and to me;
 And he sings all the day, little girl, little boy,
 "Oh, the world's running over with joy;
 But long it won't be,
 Don't you know? Don't you see?
 Unless we are as good as can be."

— LUCY LARCOM.

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HELPS TO STUDY

Word Study.

ju'ni per — an evergreen shrub or tree.

med'dle — interfere.

Notes and Questions. — Have you ever seen a thrush? What does it look like? What was the brown thrush saying? What was the cause of his happiness? Why did he hide his nest? What did he say would happen if his nest should be disturbed? Is it wrong to rob a bird's nest? What lesson does the brown thrush teach us? Describe the building of a nest.

THE HOUSEKEEPING OF THE BIRDS

I



It was toward the end of May, and our garden was becoming a great resort for birds. It is a very old-fashioned garden, stocked with ancient fruit trees. There is a luxuriant undergrowth of currants, gooseberries, and raspberries, running almost wild. In this paradise are admitted neither guns nor traps; so it is a region well known to all our feathered neighbors, and is a most desirable place for their housebuilding.

Nestbuilding was at its height in the tree tops. The most important mansion was owned by a pair of birds which, I believe, were thrushes, though they did not sing. They had gone about their domestic affairs so silently that the youngsters were nearly fledged before the nest was discovered. Afterward, for days, they gave me no little anxiety.

I used to be disturbed in my work by these big, ungainly birds. They were nearly as large as pigeons, — and kept flying frantically about the garden, screeching wildly, all because a curious but well-meaning lad was peering into their nest. If my pet cat happened to be lying in sleepy innocence on the window sill, these indignant parents would swoop fiercely past him close enough

to have pecked his eyes out. Then lighting on a near-by tree they would sit there screeching at him.

He never took any notice of them; but from the day that the newly fledged youngsters were seen hopping awkwardly about under the gooseberry bushes, I was kept in mortal fear lest my cat should walk in at the window with a young thrush in his mouth. No such disaster happened; yet I confess that when the thrush family finally disappeared, it was a great relief to my mind.

My next friends were a pair of tomtits, which took possession of a crack in the wall underneath my bedroom window. It was a mystery how they contrived to creep in and out of a hole apparently not big enough to admit a large bluebottle fly. Their little family must have been reared in very cramped lodgings. Nobody ever saw the young ones, yet it was pleasant of a morning to watch the old birds flying to and fro, hanging a moment outside of the crack, and then popping in.

They were very pretty birds, the father especially — a natty little fellow, delicately shaped, with a glossy blue-black head. After feeding time was over, he used to go and sit on the nearest tree, in sight of his tiny house, brushing up his feathers, and singing lustily. When at last this worthy little couple vanished — children and all — I greatly missed them from the crack in the wall.

But of all my garden families the one most cared for was that which I have to-day lost — my babes in the wood. It was about the end of May, when in my daily walk before breakfast, I found that, whenever I passed a particular corner, I always startled some large bird,

which flew away in alarm. And at last I saw it, beak, head, and all, emerging from a hole in a half-decayed apple tree. It was a blackbird.

“So, my friend,” said I, “You have found a home, and you shall not be disturbed.”

Therefore, though I passed the tree twenty times a day, and each time out flew a bird, for many days I kept from taking any notice of the busy little housebuilders. At last, I ventured to look in. There I saw, deep in the hollow tree, four bluish eggs.

Considering them now fairly settled in housekeeping, I took every opportunity of becoming acquainted with the newcomers. Soon I knew them well by sight, and they certainly had a fair chance of returning the compliment.

The old birds were a goodly pair. Mr. B., as I named him, was an uncommonly handsome little gentleman — jet black, with the slenderest figure, the yellowest bill, and the brightest eyes. Indeed, he was quite a dandy among blackbirds. But, with all his beauty, he was the most attentive of husbands, and the most cheerful and musical of songsters. He had great richness and variety of song, and made distinct turns and trills.

He never tired of singing. Lying awake one night, I heard him begin with the first peep of dawn; and in showery weather his exuberant carols lasted all day long. But the treat of treats was to watch him perched on the topmost spray of a poplar, and listen to him in the still June evening singing to his wife and family. His cheerful song almost brought tears into one's eyes to think there should be such a happy creature in this cruel world.

II .



All sorts of things were week after week happening in the outside world, while the blithe bird was peaceful in his garden. He no doubt looked upon it as his own personal property, currants, raspberry bushes, and all. And still he sang over and over his song of love and joy.

Mrs. B. I rarely saw, not even when looking down into the nest, though she was probably there all the while, brooding dusky and motionless over the four eggs. I thought the eggs a long time hatching; but that was Mrs. B.'s affair, not mine, and so I refrained from disturbing her.

One fine morning, passing the apple tree, I heard a chirp, weak and faint, but still the chirp of a living thing. The parents flew about so wildly, and appeared in such a frantic state of mind, that I had not the heart to frighten them further by peering into the nest. Next day, in their absence, I did so; and lo! four wide-open mouths stretched themselves up from the bottom of the hole, demanding something to eat. They seemed to be mouths and nothing else.

The third, fourth, and all following days it was just the same. I never saw any young creatures so incessantly hungry. As soon as my step was heard there arose from the heart of the apple tree four gaping beaks appealing to me for their breakfast. It was very flattering — to be mistaken for an old blackbird!

In course of time, my young family grew wise and less clamorous; but still they always chirped when I looked

in at the nest, and their parents, seeing no ill result, became more at ease — even familiar. Many a morning, as I sat reading under a tree about three yards off, Mrs. B. would come and sit on the bough near her nursery, and hold a soft chirping conversation with her little ones. Meanwhile her husband was practicing his joyous music on the topmost branch of the tree. They were a very happy family, and a pattern to many unfeathered families far and near.

One night in June there was a terrific storm. The thunder, close overhead, rolled through the heavy dawn like artillery; the rain came dripping through the roof and soaking in at the window sills. We afterward heard, with no great surprise, of buildings struck, wheat stacks burned, and trees in the next garden blasted by the lightning. But, amid all these disasters, my chief anxiety was about my young blackbirds. What would become of the poor creatures? Their nest being open to the sky, I feared that the torrents of rain would fill it like a tub, and drown them.

How this did not happen I am puzzled to decide. It may be that the parents, turning their wings into umbrellas, sat patiently over the opening of the hole till the storm was past. But next morning, when I waded through the dripping garden to see if they were alive, there they were, all four, as lively and hungry as ever! And at noon a stray sunbeam, piercing into their shadowy nursery, gave me a distinct vision of the whole family, sound asleep, packed tightly together, not a feather ruffled. How happy and contented they were! What cared they for rain and thunderstorms?

Once, coming suddenly round the corner, I saw on the edge of the hole the drollest little head, which looked about for a minute, and then popped down again. Doubtless this was the eldest of the family, desirous to see the world for himself. The next day the silence in the nest was such that I thought they had all flown; but I soon afterward caught sight of the four little yellow bills and eight twinkling eyes. Still one might now expect their departure at any time; and I own to a sad feeling at the thought of the empty nest.

One morning I overheard two of my neighbors conversing. "Yes," said one, "they are very great annoyances in gardens. I shot, this morning, a fellow which no doubt had his nest somewhere near — a remarkably fine blackbird."

"Sir," I was just on the point of saying, "was it *my* blackbird? Have you dared to shoot *my* blackbird?" and a thrill of alarm passed through me.

The wrong he did, however, was to some other young family, not mine. I found my birds chirping away, neither fatherless nor motherless. Mrs. B. was hopping among the apple branches, and Mr. B. was caroling his heart out in his favorite cherry tree.

My happy family! That was my last sight of their innocent enjoyment. The same evening a warning voice called out to me, "Your blackbirds are flown. They just climbed out of the nest and away they flew."

I looked into the familiar hole in the apple tree: there was the nest, neat and round but empty.

— DINAH MULOCK CRAIK.

Biographical. — Dinah Mulock Craik, an English novelist and poet, was born at Stoke-upon-Trent, Staffordshire, in 1826. The work for which she is best known is her novel entitled "John Halifax, Gentleman."

HELPS. TO STUDY

Word Study.

re sort' — a place to which one goes frequently or habitually.

stocked — furnished.

do mes'tic — relating to one's household.

fledged — feathered.

un gain'ly — awkward.

nat'ty — neat, tidy.

e merg'ing — coming forth into view.

ex u'ber ant — excessive, overflowing.

car'ol — a song of joy.

per'son al — not public or general.

fran'tic — moved by fear or anger.

in ces'sant ly — continually.

clam'or ous — noisy.

ar til'ler y — heavy machine guns used in war.

droll — queer, odd.

Notes and Questions. — Why was this garden a desirable place for birds to build their nests? Why was the owner glad when the thrushes disappeared? Describe the tomtits and their nest. Describe the father bird. What can you tell about his song? Describe the little blackbirds. Tell about the storm. What became of the family of blackbirds? Why should we protect birds that build their nests in our trees? In what way do birds help the farmer? How can we protect birds and encourage them to build nests in the yard?



THE BLUE JAY

O, Blue Jay, up in the maple tree,
Shaking your throat with such bursts of glee,
How did you happen to be so blue?
Did you steal a bit of the lake for your crest,
And fasten blue violets into your vest?
Tell me, I pray you, — tell me true!

Did you dip your wings in azure dye,
When April began to paint the sky,
That was pale with the winter's stay?
Or were you hatched from a bluebell bright,
'Neath the warm, gold breast of a sunbeam light,
By the river one blue spring day?

O, Blue Jay, up in the maple tree,
A-tossing your saucy head at me,
With ne'er a word for my questioning,
Pray, cease for a moment your "ting-a-link,"
And hear when I tell you what I think, —
You bonniest bit of the spring.

I think when the fairies made the flowers,
To grow in these mossy fields of ours,
Periwinkles and violets rare,
There was left of the spring's own color, blue,
Plenty to fashion a flower whose hue
Would be richer than all and as fair.

So, putting their wits together, they
Made one great blossom so bright and gay,
The lily beside it seemed blurred ;
And then they said, "We will toss it in air ;
So many blue blossoms grow everywhere,
Let this pretty one be a bird !"

— SUSAN HARTLEY SWETT.

HELPS TO STUDY

Word Study.

crest — a plume of feathers on a bird's head.

blue'bell — small blue flower.

ne'er — never.

bon'ni est — gayest, merriest, prettiest.

per'i win kle — a trailing herb that has opposite evergreen leaves and solitary blue or white flowers in their axils.

Notes and Questions. — Describe the blue jay. Read the questions the blue jay is asked in the poem. What is azure dye? When is the sky pale blue? Why is the jay called the "bonniest bit of spring"? How does the author think the blue jay came into existence? Imitate the blue jay's whistle. What are his habits?

EARLY SETTLERS

I think I see them harnessing their horses, and attaching them to their wagons, which are already fitted with bedding, provisions, and the younger children, while on their outside are fastened spinning wheels and looms; a bucket filled with tar and tallow swings betwixt the hind wheels. Several axes are secured to the bolster, and the feeding trough of the horses contains pots, kettles, and pans. The servant now becomes a driver, riding the near saddle horse, the wife is mounted on another, the worthy husband shoulders his gun, and his sons, clad in plain, substantial homespun, drive the cattle ahead, and lead the procession, followed by the hounds and other dogs.

Their day's journey is short and not agreeable. The cattle, stubborn or wild, frequently leave the road for the woods, giving the travelers much trouble; the harness of the horses here and there gives way, and immediate repair is needed. A basket which has accidentally dropped must be gone after, for nothing that they have can be spared. The roads are bad, and now and then all hands are called to push on the wagon or prevent it from upsetting. Yet by sunset they have proceeded perhaps twenty miles. Fatigued, all assemble around the fire, which has been lighted; supper is prepared, and a camp being run up, there they pass the night.

Days and weeks pass before they gain the end of their

journey. They have crossed both the Carolinas, Georgia, and Alabama. They have been traveling from the beginning of May to that of September, and with heavy hearts they traverse the neighborhood of the Mississippi. But now arrived on the banks of the broad stream, they gaze in amazement on the dark deep woods around them. Boats of various kinds they see gliding downwards with the current, while others slowly ascend against it.

A few inquiries are made at the nearest dwelling, and assisted by the inhabitants with their boats and canoes, they at once cross the river, and select their place of habitation. The exhalations arising from the swamps and morasses around them have a powerful effect on these new settlers, but all are intent on preparing for the winter. A small patch of ground is cleared by the ax and fire, a temporary cabin is erected; to each of the cattle is attached a bell before it is let loose in the neighboring canebrake, and the horses remain about the house, where they find sufficient food at that season.

The first trading boat that stops at their landing enables them to provide themselves with some flour, fish-hooks, and ammunition, as well as other commodities. The looms are mounted, the spinning wheels soon furnish yarn, and in a few weeks the family throw off their ragged clothes, and array themselves in suits adapted to the climate.

The father and sons meanwhile have sown turnips and other vegetables; and from some Kentucky flat-boat a supply of live poultry has been purchased. October tinges the leaves of the forest; the morning dews are heavy; the days hot and the nights chill, and the unac-

climatised family in a few days are attacked with ague. The lingering disease almost prostrates their whole faculties. Fortunately the unhealthy season soon passes over, and the hoar frosts make their appearance. Gradually each individual recovers strength.

The largest ash trees are felled, their trunks are cut, split, and corded in front of the building; a large fire is lighted at night on the edge of the water, and soon a steamer calls to purchase the wood, and thus add to their comforts during the winter. This first fruit of their industry imparts new courage to them; their exertions multiply, and when spring returns the place has a cheerful look.

Venison, bear's flesh, and turkeys, ducks, and geese, with now and then some fish, have served to keep up their strength, and now their large field is planted with corn, potatoes, and pumpkins. Their stock of cattle, too, has augmented; the steamer which now stops there, as if by preference, buys a calf or pig, together with their wood. Their store of provisions is renewed, and bright rays of hope enliven their spirits.

The sons discover a swamp covered with excellent timber, and as they have seen many great rafts of saw-logs, bound for the sawmills of New Orleans, floating past their dwelling, they resolve to try the success of a little enterprise. A few cross saws are purchased, and some broad-wheeled "carry-logs" are made by themselves. Log after log is hauled to the bank of the river, and in a short time their first raft is made on the shore, and loaded with cordwood.

When the next freshet sets it afloat it is secured by

long grapevines or cables, until, the proper time being arrived, the husband and sons embark on it and float down the mighty stream. After encountering many difficulties, they arrive in safety at New Orleans, where they dispose of their stock, the money obtained for which may be said to be all profit; supply themselves with such articles as may add to their convenience or comfort, and with light hearts procure a passage on the upper deck of a steamer at a very cheap rate, on account of the benefit of their labors in taking in wood or otherwise.

Every successive year has increased their savings. They now possess a large stock of horses, cows, and hogs, with abundance of provisions, and domestic comforts of every kind. The daughters have been married to the sons of neighboring squatters, and have gained sisters to themselves by the marriage of their brothers.

— JOHN JAMES AUDUBON.

HELPS TO STUDY

Word Study.

be twixt' — between.

bol'ster — a bar above the axle of a wagon on which the body of the wagon rests.

fa tighed' — tired.

trav'erse — travel over.

ex ha la'tions — mists, vapors.

mo ras'ses — boggy places.

in tent' — bent.

cane'brake — thick growth of cane.

com mod'i ties — movable goods.

un ac cli'ma tised — unaccustomed to the climate.

a'gue — chills and fevers.

fac'ul ties — powers.

hoar frosts — heavy frosts.

aug ment'ed — increased.

fresh'et — overflow of river water.

ca'bles — heavy ropes.

en coun'ter ing — meeting.

squat'ter — one who settles on government land.

Notes and Questions. — How was the early country opened up by settlers? How did the settlers travel? How did they build their cabins? How did they live at first? Do you know the story of any old settler?

It is not growing like a tree
In bulk, doth make man better be;
Or standing long an oak, three hundred year,
To fall a log at last, dry, bald, and sere:
 A lily of a day
 Is fairer far in May,
Although it fall and die that night;
It was the plant, and flower of light.
In small proportions we just beauties see;
And in short measures, life may perfect be.

— BEN JONSON.

DANDELION

There's a dandy little fellow
Who dresses all in yellow,
In yellow with an overcoat of green ;
With his hair all crisp and curly,
In the springtime bright and early,
A-tripping o'er the meadow he is seen.
Through all the bright June weather,
Like a jolly little tramp,
He wanders o'er the hillside, down the road ;
Around his yellow feather
The gypsy fireflies camp ;
His companions are the wood lark and the toad.

But at last this little fellow
Doffs his dainty coat of yellow,
And very feebly totters o'er the green ;
For he very old is growing,
And with hair all white and flowing
A-nodding in the sunlight he is seen.
Ah, poor dandy, once so spandy,
Golden dancer on the lea !
Older growing, white hair flowing,
Poor little baldhead dandy now is he !

— NELLIE M. GARRABRANT.

HELPS TO STUDY

Notes and Questions. — Describe the dandelion. How is he “like a jolly tramp”? What companion has he? Where do the “fireflies camp”? When does he “doff his coat of yellow”? How does the dandelion show its age?

THE DAISY

Out in the country, — close by the roadside, there was a country house. You yourself have certainly seen it. In front of it was a little garden of flowers. Close by it, by the ditch in the beautiful green grass, grew a little Daisy. The sun shone as warmly and as brightly upon it as upon the splendid garden flowers, and so it grew from hour to hour.

One morning the Daisy stood in full bloom, with its shining white leaves spreading like rays around the little yellow sun in the center. It did not think itself a poor, despised flower and that no one would notice it. No, it was very merry, it looked up at the warm sun and listened to the Lark caroling high in the air.

The little Daisy was as happy as if it were a great holiday, and yet it was only a Monday. All the children were at school. While they sat on their benches learning, the Daisy sat on its little green stalk and learned from the warm sun and from all around, how good God is. The Daisy was very glad that everything



which it thought and felt was sung so beautifully by the Lark. It looked up with a kind of respect to the happy bird who could sing and fly. But it was not at all sorrowful that it could not fly and sing also.

"I can see and hear," it thought. "The sun shines on me, and the forest kisses me. Oh, how many rich things are given to me!"

Inside the garden walls stood many stiff, aristocratic flowers, the less perfume they had the more they flaunted. The peonies blew themselves out to be greater than the roses, but size will not do it. The tulips had the most splendid colors and they knew it and held themselves bolt upright, that they might be seen more plainly. They did not notice the little Daisy outside there, but the Daisy looked at them a great deal and thought, "How rich and beautiful they are! Yes, the pretty bird flies across to them and visits them. I am glad that I stand so near them, for at any rate I can enjoy their splendor."

And just as she thought that — "keevit!" — down flew the Lark, but not to the peonies and tulips — no, down into the grass to the lowly Daisy, which jumped so for joy it did not know what to think.

The little bird danced around about it and sang, — "Oh, how soft the grass is! and see what a lovely little flower, with gold in its heart and silver on its dress!" The yellow point in the Daisy looked like gold and the little leaves around it shone silvery white.

How happy the little Daisy was! Nobody can think how happy! The bird kissed it with its beak and sang to it, and then flew up again into the blue air.

A quarter of an hour passed, at least, before the Daisy

could recover itself. Half ashamed, yet very happy, it looked at the other flowers in the garden, for they had seen how the bird had honored the Daisy and must understand what a joy it was. But the tulips stood up twice as stiff as before and they looked quite peaky in the face and quite red, for they had been vexed. The peonies were quite wrong-headed. It was well they could not speak, or the Daisy would have received a good scolding. The poor little flower could see very well that they were not in a good humor, and she was sorry.

Just at this moment a little girl with a great, sharp, shining knife came into the garden. She went straight to the tulips and cut off one after another of them.

"Oh," sighed the little Daisy, "that is dreadful! Now it is all over with them."

Then the girl went away with the tulips. The Daisy was glad to stand out in the grass and be only a poor little flower. It felt very grateful, and when the sun went down it folded its leaves and went to sleep, and dreamed all night about the sun and the pretty little bird.

The next morning when the flower again stretched out all its white leaves, like little arms, toward the air and the light, it heard the voice of the bird, but the song he was singing sounded sad. Yes, the poor Lark had good reason to be sad. He was caught and now sat in a cage close by the open window. He sang of his free and happy roaming. He sang of the young green corn in the fields, and of the long journey he would like to make on his wings through the air. The poor Lark was not happy, for there he sat a prisoner in a cage.

The little Daisy wished very much to help him, but

what was it to do? Yes, that was difficult to make out. It quite forgot how beautiful everything was around it, how warm the sun shone, and how splendidly white its own leaves were. Ah! it could think only of the imprisoned bird, and how it could do nothing to help him.

Just then two little boys came out of the garden. One of them carried in his hand the knife which the girl had used to cut off the tulips. They went straight up to the little Daisy, which could not at all make out what they wanted.

"Here we may cut a fine piece of turf for the Lark," said one of the boys; and he began to cut off a square patch round about the Daisy, so that the flower remained standing in its piece of grass.

"Tear off the flower!" said the other boy.

And the Daisy trembled with fear, for to be torn off would be to lose its life. Now it wanted very much to live, and to be given with the piece of turf to the captive Lark.

"No, let it stay," said the other boy; "it makes such a nice ornament."

And so it was left and was put into the Lark's cage.

The poor little bird cried aloud for his liberty, and beat his wings against the wires of his prison. The little Daisy could not speak to comfort him, and so the whole morning passed.

"There is no water," said the Lark. "They have all gone out and have forgotten to give me anything to drink. My throat is dry and burning. Oh, I must die! I must leave the warm sunshine, the fresh green, and all the splendor that God has made!"

And then he thrust his beak into the cool turf to re-

fresh himself a little with it. As he did this his eye fell upon the Daisy and he nodded to it and kissed it with his beak, and said :

“You also must wither in here, poor little flower. They have given you to me with the little patch of green on which you grew, instead of the whole world which was mine out there. Every little blade of grass shall be a great tree for me, and every one of your fragrant leaves a great flower. Ah, you only tell me how much I have lost !”

“If I could only comfort him !” thought the Daisy.

It could not stir a leaf, but the scent which came from its delicate leaves was much stronger than usual. The bird noticed it, and though he was fainting with thirst, he ate only the green grass and did not touch the flower.

It was evening and yet no one came to give the poor bird a drop of water. He stretched out his pretty wings and beat the air wildly with them. His song changed to a mournful piping, his head sank down toward the flower and his little heart broke.

The flower could not fold its leaves and sleep as it had done the evening before. It drooped, sorrowful and sick, toward the earth.

The boys did not come till the next morning, and when they found the bird dead they wept — wept many tears. They dug a neat grave for the bird, which they covered with the petals of flowers. They put his body into a pretty red box, for he was to be royally buried, — the poor bird ! When he was alive and could sing they forgot him, they let him sit in his cage and suffer want.

Now that he was dead they gave him flowers and tears.

The patch of turf with the Daisy on it was thrown out into the road. No one thought about the flower that had been so sorry for the little bird and had wanted so much to comfort him.

— HANS CHRISTIAN ANDERSEN.

HELPS TO STUDY

Word Study.

de spised' — slighted, scorned.

car'ol ing — singing joyfully.

ar is to crat'ic — pertaining to a higher class.

per'fume — a sweet-smelling scent.

flaunt'ed — made an impudent show of.

bolt — straight up.

peak'y — thin.

cap'tive — imprisoned.

lib'er ty — freedom.

thrust — pushed or drove with force.

pip'ing — the shrill notes of birds.

Notes and Questions. — Where did the daisy grow? Why was it happy? Tell about the visit the lark paid the daisy. What happened after the lark left? How did the daisy spend the night? What caused it to be sad the following morning? How did it reach the lark's cage? How did the lark show he was glad to see the daisy? What caused the lark's death? Tell about its burial.



DAFFODILS

I wandered lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host, of golden daffodils ;
Beside the lake beneath the trees,
Fluttering and dancing in the breeze.

The waves beside them danced ; but they
Outdid the sparkling waves in glee :
A poet could not but be gay,
In such a jocund company :
I gazed — and gazed — but little thought
What wealth the show to me had brought :

For oft, when on my couch I lie
In vacant or in pensive mood,
They flash upon that inward eye
Which is the bliss of solitude ;
And then my heart with pleasure fills,
And dances with the daffodils.

— WILLIAM WORDSWORTH.

HELPS TO STUDY

Word Study.

joc'und — merry, lively.

va'cant mood — thinking of nothing in particular.

pen'sive mood — thinking, perhaps sadly.

in'ward eye — memory.

bliss — blessedness, joy.

sol'i tude — state of being alone, loneliness.

Notes and Questions. — Tell what the poet was doing when he saw the daffodils. What words in the first stanza tell that there were a great many daffodils? Where were they growing? In what way does the poet compare them with waves? Would you be gay in such "jocund company"? What does the poet mean by the "wealth the show to me had brought"?

THE CAT'S SEARCH FOR HAPPINESS

So the Cat set off by herself to learn how to be happy, and to be all that a Cat could be. It was a fine sunny morning. She determined to try the meadow first, and, after an hour or two, if she had not succeeded, then to go off to the wood. A blackbird was piping away on a thornbush as if his heart was running over with happiness. The Cat had breakfasted, and so was able to listen without any mixture of feeling. She didn't sneak. She walked boldly up under the bush, and the bird, seeing she had no bad purpose, sat still and sung on.

"Good morning, Blackbird; you seem to be enjoying yourself this fine day."

"Good morning, Cat."

"Blackbird, it is an odd question, perhaps. What ought one to do to be as happy as you?"

"Do your duty, Cat."

"But what is my duty, Blackbird?"

"Take care of your little ones, Cat."

"I haven't any," said she.

"Then sing to your mate," said the bird.

"Tom is dead," said she.

"Poor Cat!" said the bird. "Then sing over his grave. If your song is sad, you will find your heart grow lighter for it."

"Mercy!" thought the Cat. "I could do a little singing with a living lover, but I never heard of singing for a dead one. But you see, bird, it isn't cats' nature.

When I am cross, I mew. When I am pleased, I purr ; but I must be pleased first. I can't purr myself into happiness."

"I am afraid there is something the matter with your heart, my Cat. It wants warming ; good-by."

The Blackbird flew away. The Cat looked sadly after him. "He thinks I am like him ; and he doesn't know that a cat is a cat," said she. "As it happens, now, I feel a great deal, for a cat. If I hadn't a heart, I shouldn't be unhappy. I won't be angry. I'll try that great fat fellow."

The Ox lay placidly chewing, with content beaming out of his eyes and playing on his mouth.

"Ox," she said, "what is the way to be happy?"

"Do your duty," said the Ox.

"Bother," said the Cat, "duty again ! What is it, Ox?"

"Get your dinner," said the Ox.

"But it is got for me, Ox ; and I have nothing to do but eat it."

"Well, eat it, then, like me."

"So I do ; but I am not happy for all that."

"Then you are a very wicked, ungrateful Cat."

The Ox munched away. A Bee buzzed into a buttercup under the Cat's nose.

"I beg your pardon," said the Cat, "it isn't curiosity — what are you doing?"

"Doing my duty ; don't stop me, Cat."

"But, Bee, what is your duty?"

"Making honey," said the Bee.

"I wish I could make honey," sighed the Cat.

"Do you mean to say you can't," said the Bee. "How stupid you must be. What do you do, then?"

"I do nothing, Bee, I can't get anything to do."

"You won't get anything to do, you mean, you lazy Cat! You are a good-for-nothing drone. Do you know what we do with our drones? We kill them: and that is all they are fit for. Good morning to you."

"Well, I am sure," said the Cat, "they are treating me civilly. I had better have stopped at home at this rate. Stroke my whiskers! heartless! wicked! good-for-nothing! stupid! and only fit to be killed! This is a pleasant beginning, anyhow."

— J. A. FROUDE.

HELPS TO STUDY

Biographical. — James A. Froude (1771–1859) was a well-known English author and educator. The work for which he is especially famous is his history of England in twelve volumes, a detailed account of one of the most interesting periods of English history, written in a vivid and dramatic style.

Word Study.

plac'id ly — quietly.

munched — ate.

civ'il ly — politely.

Notes and Questions. — Why did the Cat ask the Blackbird "what to do to be happy"? What do you think of the answer that she received? What answer did the Ox give to the Cat's question? Why did he accuse the Cat of being ungrateful? How did the Cat like the way the Bee talked to her? What conclusion did the Cat reach? Why do the names of the animals given in this story begin with capital letters? Why do you think the cat was unhappy?

THE BROOK

I come from haunts of coot and hern,
I make a sudden sally,
And sparkle out among the fern,
To bicker down a valley.

By thirty hills I hurry down,
Or slip between the ridges,
By twenty thorps, a little town,
And half a hundred bridges.

Till last by Philip's farm I flow
To join the brimming river ;
For men may come, and men may go,
But I go on forever.

I chatter over stony ways,
In little sharps and trebles ;
I bubble into eddying bays ;
I babble on the pebbles.

With many a curve my bank I fret
By many a field and fallow,
And many a fairy foreland set
With willow-weed and mallow.

I chatter, chatter, as I flow
To join the brimming river ;
For men may come, and men may go,
But I go on forever.



"AND SPARKLE OUT AMONG THE FERN,
TO BICKER DOWN THE VALLEY"

I wind about, and in and out,
 With here a blossom sailing,
And here and there a lusty trout,
 And here and there a grayling,
And here and there a foamy flake
 Upon me as I travel,
With many a silvery waterbreak
 Above the golden gravel,
And draw them all along and flow
 To join the brimming river,
For men may come, and men may go,
 But I go on forever.

I steal by lawns and grassy plots,
 I slide by hazel covers,
I move the sweet forget-me-nots
 That grow for happy lovers.

I slip, I slide, I gloom, I glance,
 Among my skimming swallows ;
I make the netted sunbeam dance
 Against my sandy shallows.

I murmur under moon and stars
 In brambly wildernesses ;
I linger by my shingly bars ;
 I loiter round my cresses ;

And out again I curve and flow
 To join the brimming river,
For men may come, and men may go,
 But I go on forever.

— ALFRED, LORD TENNYSON.

HELPS TO STUDY

Biographical. — Alfred Tennyson was born at Somersby, England, in 1809 and died at Aldworth in 1892. He was poet laureate of England, succeeding Wordsworth. No poetry of the nineteenth century ranks higher than Tennyson's.

Word Study.

haunt — a place to which one frequently resorts.

coot — a wading bird.

hern — a heron, a wading bird.

sal'y — a leap, a rushing out.

bick'er — to move with a pattering noise.

thorps — small villages.

sharps and tre'bles — musical notes.

ed'dy ing — moving in a circle.

fret — to ornament with raised work.

fal'low — land that has lain a year or more untilled.

fore'land — headland.

wil'low — a tree or shrub with willow-like foliage.

mal'low — a plant.

lust'y — stout, strong.

gray'ling — a fish.

ha'zel covers — underbrush of hazel, which conceals game.

glance — dart by.

netted sunbeam — network of sunbeams and shadows.

shin'gly — abounding with gravel.

bar — a bank of sand, especially at the mouth of a river.

Notes and Questions.— Name all the words that tell what the brook does ; as come, make, sparkle, etc. Describe the place from which the brook comes. Does the second stanza indicate a long or a short journey? What object has the brook? Does it regard this as a duty or a pleasure? Why? How does the brook call attention to the fact that its work is never finished? How many times is this mentioned in the poem?

THE WATER ! THE WATER !

The water ! the water !
The joyous brook for me,
That tuneth through the quiet night
Its ever-living glee.
The water ! the water !
That sleepless, merry heart,
Which gurgles on unstintedly,
And loveth to impart
To all around it some small measure
Of its own most perfect pleasure.

—WILLIAM MOTHERWELL.

SUNFISH

The lamprey is not a fish at all, only a wicked imitation of one which can deceive nobody. But there are fishes which are unquestionably fish — fish from gills to tail, from head to fin, and of these the little sunfish may stand first. He comes up the brook in the spring, fresh as “coin just from the mint,” finny arms and legs wide spread, his gills moving, his mouth opening and shutting rhythmically, his tail wide spread, and ready for any sudden motion for which his erratic little brain may give the order.

The scales of the sunfish shine with all sorts of scarlet, blue, green, and purple and golden colors. There is a black spot on his head which looks like an ear, and sometimes grows out in a long black flap, which makes the imitation still closer. There are many species of the sunfish, and there may be a dozen of them in the same brook, but that makes no difference; for our purposes they are all one.

They lie poised in the water, with all fins spread, strutting like turkey cocks, snapping at worms and insects whose only business in the brook is that the fishes may eat them. When the time comes, the sunfish makes its nest in the fine gravel, building it with some care — for a fish. When the female has laid her eggs the male stands guard until the eggs are hatched. His sharp teeth and snappish ways, and the bigness of his appearance when the fins are displayed, keep the little fishes away.

Sometimes, in his zeal, he snaps at a hook baited with a worm. He then makes a fierce fight, and the boy who holds the rod is sure that he has a real fish this time. But when the sunfish is out of the water, strung on a willow rod, and dried in the sun, the boy sees that a very little fish can make a good deal of a fuss.

— DAVID STARR JORDAN.

HELPS TO STUDY

Biographical. — David Starr Jordan was born in New York in 1851. He was the president of Leland Stanford University in California. He is an eminent scholar who has contributed many popular articles to the literature of science.

Word Study.

lam'prey — an eel-like fish.

im i ta'tion — that which resembles something else.

un ques'tion a bly — not to be disputed.

er rat'ic — changeable.

poised — balanced.

dis played' — shown.

zeal — enthusiasm, ardent and active interest.

Notes and Questions. — Describe the appearance of the sunfish in the spring. Upon what do they feed? Where does the sunfish make its nest? How are the eggs guarded? What happens when the sunfish bites a baited hook?



UP THE BROOK

THE BROOK SONG

Little brook! Little brook!
You have such a happy look —
Such a very merry manner, as you swerve and curve and
crook —

And your ripples, one by one,
Reach each other's hands and run
Like laughing little children in the sun!

Little brook, sing to me;
Sing about the bumblebee

That tumbled from a lily bell and grumbled mumbingly,
Because he wet the film
Of his wings, and had to swim,
While the water bugs raced round and laughed at him !

Little brook, sing a song
Of a leaf that sailed along
Down the golden-braided center of your current swift and
strong,
And a dragon fly that lit
On the tilting rim of it,
And rode away and wasn't scared a bit.

And sing — how oft in glee
Came a truant boy like me,
Who loved to lean and listen to your lilting melody,
Till the gurgle and refrain
Of your music in his brain
Wrought a happiness as keen to him as pain.

Little brook, laugh and leap !
Do not let the dreamer weep ;
Sing him all the songs of summer till he sink in softest
sleep ;
And then sing soft and low
Through his dreams of long ago —
Sing back to him the rest he used to know !

— JAMES WHITCOMB RILEY.

HELPS TO STUDY

Word Study.

swerve — to turn aside.

mum'bling ly — with a muttering sound.

film — thin skin.

tilt'ing — slightly turned up.

tru'ant — staying away from school without leave.

lilt'ing melody — a joyful, swinging song.

re frain' — part of a song.

Notes and Questions. — Why does the brook have such a happy look? Do you think the ripples in a stream look like children in a ring holding each other's hands and dancing around? What song does the brook sing about the bumblebee? About the leaf and the dragon fly? What is meant by the "golden-braided center" of the current? What did the poet love to do as a truant boy? What does he ask the brook to do now that he is a man?

Read each stanza slowly and see how clearly you can construct the mental picture it describes. Which stanza suggests to you the clearest picture? Which is the least clear? Which suggests more than one picture? Which poem in the reader do you like best? Why?

CATFISH

“And what fish will the natural boy naturally take?” In America, there is but one fish which enters fully into the spirit of the occasion. It is a fish of many species according to the part of the country, and of as many sizes as there are sizes of boys. This fish is the horned pout and all the rest of the species of *Ameirus*. Horned pout is its Boston name. Bullhead is good enough for New York, and for the rest of the country, big and little, all the fishes of this tribe are called catfish.

A catfish is a jolly blundering sort of a fish, a regular Falstaff of the ponds. It has a fat jowl, and a fat body, which it is always trying to fill. Smooth and sleek, its skin is almost human in its delicacy. It wears a long mustache, with scattering whiskers of other sort. Meanwhile it always goes armed with a sword, three swords, and these it has always on hand, always ready for a struggle on land as well as in the water. The small boy often gets badly stuck on these poisoned daggers, but, as the fish knows how to set them by a muscular twist, the small boy learns how, by a like untwist, he may unset and leave them harmless.

The catfish lives in sluggish waters. It loves the mill-pond best of all, and it has no foolish dread of hooks when it goes forth to bite. Its mouth is wide. It swallows the hook, and very soon it is in the air, its white throat gasping in the untried element. Soon it joins its fellows on the forked stick, and even then, uncomfortable

as it may find its new relations, it never loses sight of the humor of the occasion. Its large head and expansive forehead betoken a large mind. It is the only fish whose brain contains a Sylvian fissure, a piling up of tissue consequent on the abundance of gray matter. So it understands and makes no complaint. After it has dried in the sun for an hour, pour a little water over its gills, and it will wag its tail, and squeak with gratitude. And the best of all is, there are horned pouts enough to go around.

The female horned pout lays thousands of eggs, and when these hatch, she goes about near the shore with her school of little fishes, like a hen with myriad chicks. She should be respected and let alone, for on her success in rearing this brood of "bullying little rangers" depends the sport of the small boy of the future.

— DAVID STARR JORDAN.

HELPS TO STUDY

Word Study.

nat'u ral — according to nature.

Fal'staff — a character in one of Shakespeare's dramas, who is represented as a hearty eater, and a witty, jovial fellow.

jowl — the cheek, the jaw.

sleek — glossy, smooth.

slug'gish — having little motion.

hu'mor — wit, merriment.

ex pan'sive — widely extended.

be to'ken — indicate, show.

Syl'vi an fissure — a deep furrow separating the forehead from the ear lobe of the brain.

gray matter — grayish matter of the brain.

myr'i ad — an immense number.

rear'ing — raising.

Notes and Questions. — To what tribe do the horned pout and the bullhead belong? Describe the catfish. Why is he called "a regular Falstaff of the pond"? With what is a catfish armed? How may "these poisoned daggers be unset"? Where does the catfish like to live? Describe the manner of catching catfish. What does the small boy string his fish on? Describe the catfish's behavior after he is caught. In what respect is the brain of the catfish unlike that of any other fish? How long does the catfish live after being taken out of the water? How many eggs does the female horned pout lay? What is a school of fish? Why should the little fish be cared for?

Pleasant it was, when woods were green,
 And winds were soft and low,
 To lie amid some sylvan scene,
 Where, the long drooping boughs between,
 Shadows dark and sunlight sheen
 Alternate come and go.

* * * * *

And all the broad leaves over me
 Clapped their little hands in glee,
 With one continuous sound.

— LONGFELLOW.

FOUR PLANT RELATIVES

“Back of the bread is the snowy flour ;
Back of the flour is the mill ;
Back of the mill the growing wheat
Nods on the breezy hill ;
Over the wheat is the glowing sun
Ripening the heart of the grain ;
Above the sun is the gracious God,
Sending the sunlight and rain.”

Plants have relatives just as people do. There is a group of plant cousins which are sometimes spoken of as “small grains.” These belong to one very large family called “Graminæ,” or the grass family. They include wheat, barley, rye, and oats.

Wheat is perhaps the oldest one of the family. It is spoken of in the oldest books that we have, and it may have been known even before books were written. It is claimed that it originated in Sicily and from there was carried to Greece, Egypt, and China. It has since followed the current of civilization westward, having been brought to America by the earliest settlers.

In the new world, wheat will grow successfully as far south as Cuba, and as far north as Alaska. In the old world it will grow as far south as Egypt and Algeria, and as far north as Norway. The quality of the grain varies a great deal with differences of climate.

A fertile clay loam soil is best for wheat. The soil should be well broken to a good depth, in the fall if pos-



WHEAT



RYE



BARLEY



OATS

sible, and then allowed to settle. The seed should be sown and worked in, leaving well-prepared but compact soil below, with two or three inches of loose soil above.

Barley is about as old as wheat. It will grow wherever wheat grows, and will thrive even under conditions where

wheat would not do so well. Barley was the chief source of bread until about the sixteenth century, when wheat became more generally grown. For the best results, barley should be sown on a carefully prepared, well-drained, fertile, sandy loam soil.

Rye was first raised in western Asia and on the shores of the Mediterranean Sea. It has been grown for two thousand years or more. This plant does well on much poorer soil than wheat, though the soil should be prepared for it in the same way as for wheat.

Oats are not as old as either barley or wheat, but they were cultivated in the old world before the discovery of America. A cold, moist climate suits oats the best. The crop will do well on nearly all soils except the very richest and the very poorest. The best soil for it is a well-drained, fertile, clay loam. It is necessary to prepare the soil carefully for the oat crop.

HELPS TO STUDY

Word Study.

o rig'i nat ed — began, came from.

loam — soil rich in vegetable matter.

cur'rent of civ i li za' tion — the movement of civilized peoples.

Notes and Questions. — Why do we say wheat, barley, rye, and oats are cousins? Why do we think wheat is the oldest? What kind of soil is best for wheat? What kind of soil suits barley best? What kind of climate suits oats best? In what part of the United States are they most grown? Why are they little grown in the South? When are these grains sown? When is the crop harvested? Tell the story of wheat from the time it is sown until it comes to the table as a loaf of bread.



John Linnell

IN THE WHEAT FIELD

When the lids of the virgin Dawn unclose,
When the earth is fair and the heavens are calm,
And the early breath of the wakening rose
Floats on the air in balm,
I stand breast high in the pearly wheat
That ripples and thrills to a sportive breeze,
Borne over the field with its Hermes feet,
And its subtle odor of southern seas ;
While out of the infinite azure deep
The flashing wings of the swallows sweep,
Buoyant and beautiful, wild and fleet,
Over the waves of the whispering wheat.

— PAUL HAMILTON HAYNE.

HELPS TO STUDY

Biographical. — Paul Hamilton Hayne was born in South Carolina after the Civil War, but spent many years in Georgia. He wrote many beautiful poems of nature. He is justly classed among the best known poets of the South.

Word Study.

vir'gin — a young maiden.

balm — that which heals.

pearl'y — like a pearl.

Her'mes — the messenger of the gods, who had winged feet.

sub'tle — delicate.

in'fi nite — beyond measure, boundless.

buoy'ant — light.

Notes and Questions. — Why is Dawn called a virgin? Why is wheat called "pearly"? What is a "sportive breeze"? What is the appearance of a wheat field when ripe? What is meant by the "infinite azure deep"? To what does the poet liken a wheat field in the last line?

THE FARMER'S GOLD

Drop a grain of California gold into the ground, and there it will lie unchanged to the end of time, the clods on which it falls not more cold and lifeless. Drop a grain of our blessed gold into the ground, and lo! a mystery. In a few days it softens, it swells, it shoots upward, it is a living thing.

It is yellow itself, but it sends up a delicate spire, which comes peeping, emerald green, through the soil. It expands to a vigorous stalk; revels in the air and sunshine; arrays itself, more glorious than Solomon, in its broad, fluttering, leafy robes. At last it ripens into two or three magnificent batons, each of which is studded with hundreds of grains of gold.

There are seven hundred and twenty grains on the ear which I hold in my hand. I presume there are two or three such ears on the stalk. This would give us one thousand, four hundred and forty — perhaps two thousand, one hundred and sixty — grains as the produce of one. They would yield next season, if they were all successfully planted, four thousand, two hundred — perhaps six thousand, three hundred — ears. Who does not see that the produce of one grain in a few years might feed all mankind? And yet, with this visible creation annually springing and ripening around us, there are men who doubt, who deny, the existence of God!

But it will be urged, perhaps, in behalf of the California gold, that, though one crop only of gold can be



IN THE CORN FIELD

gathered from the same spot, yet once gathered it lasts to the end of time; while our vegetable gold is produced only to be consumed, and when consumed is gone forever. But this would be error.

It is true the California gold will last forever unchanged, if its owner chooses. But, while it so lasts, it is of no use; no, not as much as its value in pig iron, which makes the best of ballast; whereas gold, while it is gold, is good for little or nothing. You can neither eat it nor drink it; you can neither burn it as fuel nor build a house with it. It is really useless till you exchange it for consumable, perishable goods.

Far different the case with our Atlantic gold. It does not perish when consumed, but is transmuted to a higher life. Last June it sucked from the cold breast of the earth the watery nourishment of its sap vessels; and now quivers and thrills with the fivefold mystery of sense; and ministers to the higher mystery of thought. Heaped up in your granaries this week, the next it will strike in the stalwart arm and glow in the blushing cheek and flash in the beaming eye.

The slender stalk, which we have seen shaken by the summer breeze, bending in the cornfield under the yellow burden of harvest, is indeed the "staff of life," which, since the world began, has supported the toiling and struggling myriads of humanity on the mighty pilgrimage of being.

— EDWARD EVERETT.

HELPS TO STUDY

Biographical. — Edward Everett (1794–1865) was a native of Massachusetts. At the age of seventeen he graduated from Harvard College. He served his state as representative in Congress, and as governor. Later, he was minister to England, president of Harvard, and senator of the United States. He was a scholar of deep learning, an orator of great purity of style, and a statesman of distinction.

Word Study.

ba ton' — a staff.

stud'ded — thickly set.

vis'i ble — capable of being seen.

bal'last — weighty matter carried by a ship to steady it.

con sum'a ble — that which may be used up.

trans mu'ted — changed from one substance into another.

gran'a ry — a storehouse for grain.

stal'wart — strong.

Notes and Questions. — Tell what happens to a seed before a plant can spring from it. Describe the cultivation of corn. How many ears of corn are on each stalk? About how many grains are on each ear? In what ways are the farmer's gold and California gold alike? Mention ways in which they are unlike. How does the farmer's gold become a part of us? What is meant by "the staff of life"? What is meant by the "pilgrimage of being"?



INDIAN CORN

I

How the Indians Raised Corn

When the white man first came to America he found the Indians in the southern part of the continent raising corn and using it for food. The plant has never been found growing wild. Evidence seems to indicate that it is a native of Mexico and Central America, but the exact origin of it is not known.

When Indian corn, or "maize," was first known, the plant was very different from that seen to-day. The rather small ears grew on the top of the stalk where the tassel now grows. Each grain had a small shuck covering, somewhat like the wheat grain, and in addition to this there was a shuck or husk over the entire ear as at present.

In time the plant formed the habit of growing the ears on the side of the stalk, and the tassel, which makes the pollen, was left to grow on the top of the plant. The shoot on the side of the plant is the pistil. Before the grains develop, the pollen grains from the tassel must fall on the silk and work their way back to the little ovules, or blisters, on the cob.

When a single corn plant grows at some distance from other corn plants, not enough pollen reaches the silk and only a few grains may be developed. Sometime when you see a corn plant growing alone in a cotton field, examine the ear and see how few grains are on the cob.

The history of the corn plant is always of special interest to Americans. Black Hawk, a famous Indian chief, is quoted on the subject of the corn dance, as saying :

“When we returned to our village in the spring from our hunting grounds we would open the caches and take out corn and other provisions which had been put up in the fall, and then commence repairing our lodges.

“As soon as this is accomplished we repair the fences around our fields and clean them off ready for planting corn. This work is done by our women. The men, during this time, are feasting on dried venison, bear’s meat, wild fowl, and corn.

“Our women plant the corn, and as soon as they get done we make a feast and dance the corn dance. At this feast our young braves select the young woman they wish to have for a wife. When this is over we feast again and have our national dance.

“When our national dance is over, our cornfields hoed, and every weed dug up, and our corn about knee high,

all our young men would start in a direction toward sun-down to hunt deer and buffalo, and the remainder of our people start to fish. Every one leaves the village and remains away about forty days. They then return, the hunting party bringing in dried buffalo and deer meat, the others dried fish.



From the painting by Wray

ROGER WILLIAMS AND THE INDIANS

“This is a happy season of the year; having plenty of provision, such as beans, squashes, and other produce, with our dried meat and fish, we continue to make feasts and visit each other until our corn is ripe.

“When the corn is fit for use another great ceremony takes place, with feasting and returning thanks to the Great Spirit for giving us corn. We continue our sport and feasting until the corn is all secured. We then prepare to leave our village for our hunting grounds.”

Mowry adds interestingly :

“Thus we see that the most important crop among the Indians was maize or Indian corn. This grain is specially suited to the climate and soil of a large portion of the country; it was wholly unknown to the Europeans who first came to America.

“John Smith in Virginia and Roger Williams in New England were much interested in the Indian corn. It is from their writings that we learn how the red men cultivated and used this strange product of the New World.

“As corn was the Indians’ main dependence, they ate it at all times and in various ways. They roasted the green ears in the ashes; sometimes they cut the kernels from the cob and boiled them with beans, making a kind of succotash. Meal was made by pounding the kernels in a wooden mortar; if the corn was old it was soaked overnight and pounded in the morning.

“This meal also was cooked in different ways. Sometimes it was wrapped in corn husks and boiled; at other times it was mixed with water and made into cakes, which were baked in the ashes of the fire. Often a pudding was made from the meal, in which blackberries were placed. When the Indians traveled, they were accustomed to carry enough of this meal to last several days, either in a small basket or a hollow leathern girdle.

“Such was life among the Indians. Usually food was plenty and feasting was common, but at times food was scarce and fasting was necessary. If the Indian had sufficient for to-day, he cared little for to-morrow. If the corn crop failed or if the hunting expedition turned out badly, the red man accepted it as a necessary evil and made no complaint.”

II

Where Corn Grows

“A song for the plant of my own native West,
Where nature and freedom reside,
By plenty still crowned, and by peace ever blest,
To the corn! The green corn of her pride!”

Corn grows well in every state of the United States, and is by far the most important grain crop that we have. Most of the world's supply of this staple is grown in this country. The greatest corn-producing states are Ohio, Indiana, Illinois, Iowa, Kansas, Nebraska, and Missouri. These seven states grow about half the corn raised in the United States. The area devoted by them to this crop produces so abundantly and has become so widely known as a corn-growing section, that it is spoken of as the “corn belt.” In this corn belt, stock raising is one of the chief occupations of farmers, and corn is raised for the stock as well as for market. Large quantities of the grain are also shipped to other parts of the country.

In the South, where cotton can be grown so successfully, less attention has been given to corn raising. As a consequence, the Southern states have bought, chiefly from the “corn belt,” large amounts of the grain each year. This has been a great mistake. Corn can be raised successfully in every Southern state, and the Southern farmer is unwise to depend on another section for what he can raise himself at much less cost. Corn in the market is bought and sold by speculators who raise

the price whenever possible. This leaves the Southern farmer at the mercy of the speculator for one of the principal articles of food, for himself and for his stock. The wisest and most successful farmers always try to produce as much corn as they need both for stock feed and for table use.

In former years the Southern farmer did not study the cultivation of corn as he studied the cultivation of cotton. Nowadays he is learning that by applying scientific methods to the culture of corn, he can raise something like a hundred bushels to the acre, and that before long the South will not have to buy of her neighbors at their own prices.

Everywhere in the South a number of agencies are at work to bring the people to a knowledge of the importance of corn as a universal crop. As a result of the work of the Boys' Corn Clubs, the Farmers' Coöperative Demonstration Work, the agricultural colleges, and the press, the interest in corn raising and the amount of corn produced annually have increased in the last few years.



A SPLENDID ACRE

Showing how corn can be made to grow in the South

HELPS TO STUDY**Word Study.**

caches (*kashes*) — places of concealment.

lodg'es — homes of the Indians.

ven'i son — deer meat.

cer'e mo ny — special service.

de pend'ence — source of supply.

suc'co tash — a mixture of corn and beans.

re side' — live.

sta'ple — the principal product of a locality.

spec' u la tors — men who buy and sell for profit.

Notes and Questions. — Of what countries is corn probably native? Describe the corn or maize of the Indians. Describe how the Indians raised their corn. Tell about the corn dance. How did the Indians prepare the corn for food? Where does corn grow in the United States? Name the greatest corn-producing states. Point out these states on the map. What can you say about corn raising in the South?

BOY SCOUTS

Whoever wants to know the real value of a boy, let him ask any Britain who fought through the Boer War in South Africa how the English laddies behaved during the siege of Mafeking. It was a time to try men's souls, with the city surrounded by the enemy and the small ranks of its gallant defenders reduced hourly by the cruel fire of the attacking Boer. It was a time when every man's value was more than trebled, and when every boy was called upon to be a man.

And how did those laddies behave? Why, they answered that call. Uniformed and drilled like soldiers, they became men indeed. As messengers, they carried dispatches from fort to fort under fire of shot and shell, and faced death as bravely as their fathers faced it. As sentinels and orderlies, they lived up to the last requirement of duty. At whatever post of service they were placed they behaved like soldiers. So conspicuous was the service of these boy soldiers of England that the editor of the London "Daily Express" wrote of them: "Throughout the hail of Boer bullets these young heroes, mounted mostly on bicycles, carried on their duties without wavering. At the end of the war they received their medals like the grown-up soldiers."

The behavior of those British lads at Mafeking prepared English ground for the seeds of the Boy Scout movement which were to be sown some years later.



LEARNING THE ROPES

To become a scout a boy must learn the scout law, the scout oath, and how to tie four kinds of knots

While the English lads were risking their young lives in the defense of the South African city, Ernest Thompson-Seton, the great nature lover, was banding American boys together to play at the man's game, that they, too, might answer nobly when duty called. He knew that real men are needed in peace as well as in time of war. He knew that there are dangers to be faced other than the danger from shot and shell. He knew that there are weak and suffering ones calling hourly for the support of some greater strength and fortitude. He knew that it takes a soldier's courage to play the man every day in the year. And in that knowledge, the great movement to awaken the *man* in boys began. Perhaps the wonderfully similar reception granted the new idea on both sides of the Atlantic is due to the fact that the lads who helped to defend Mafeking and the lads who braved the risks of American wood and stream with Ernest Thompson-Seton are of the same blood and brawn.

It is interesting to note in passing that, when Mr. Seton invaded England with his great idea of banding boys together for the development of the manhood in them, he at once met a strong ally in Lieutenant General Sir Robert Baden-Powell, the hero of Mafeking, who was already drilling the boys of his neighborhood. The two together soon enlisted hundreds of thousands of English boys in the great work.

The Boy Scout organization exists for the purpose of turning boys into upright, honorable, chivalrous, patriotic, kindly, self-reliant, and useful men. That it will do this for the boy who fulfills his promise, there need be no doubt, for this is what he pledges himself to do :

"I give my word of honor that I will do my best,

1. To do my duty to God and my country.
2. To help other people at all times.
3. To obey the Scout Law."



A SCOUT IS HELPFUL

The law in brief is as follows :

1. *A scout is trustworthy.*

A scout's honor is to be trusted. If he were to violate his honor by telling a lie, or by cheating, or by not doing exactly a given task, when trusted on his honor, he may be directed to hand over his scout badge.

2. *A scout is loyal.*

He is loyal to all to whom loyalty is due: his scout leader, his home, parents, and country.

3. *A scout is helpful.*

He must be prepared at any time to save life, help

injured persons, and share the home duties. He must do at least one good turn to somebody every day.

4. *A scout is friendly.*

He is a friend to all and a brother to every other scout.

5. *A scout is courteous.*

He is polite to all, especially to women, children, old people, and the weak and helpless. He must not take pay for being helpful or courteous.

6. *A scout is kind.*

He is a friend to animals. He will not kill or hurt any living creature needlessly, but will strive to save and protect all harmless life.

7. *A scout is obedient.*

He obeys his parents, scout master, patrol leader, and all other duly constituted authorities.

8. *A scout is cheerful.*

He smiles whenever he can. His obedience to orders is prompt and cheery. He never shirks nor grumbles at hardships.

9. *A scout is thrifty.*

He does not wantonly destroy property. He works faithfully, wastes nothing, and makes the best use of his opportunities. He saves his money so that he may pay his own way, be generous to those in need, and helpful to worthy objects.

10. *A scout is brave.*

He has the courage to face danger in spite of fear and has to stand up for the right against the coaxings of friends or the jeers or threats of enemies, and defeat does not down him.

11. *A scout is clean.*

He keeps clean in body and thought, stands for clean speech, clean sport, clean habits, and travels with a clean crowd.

12. *A scout is reverent.*

He is reverent toward God. He is faithful in his religious duties and respects the convictions of others in matters of custom and religion.

Boy Scouts are formed into patrols, which consist of eight boys each, one of whom is appointed patrol leader, and another assistant patrol leader. Three or more patrols form a troop. A scout master has charge of one or more patrols or of a troop. The scout master is guided by a local council, composed of prominent men in a community. Where there are many troops in a place, there is a scout commissioner at the head of the scout masters.

A scout becomes first a tenderfoot, after having met certain prescribed requirements. After serving a month, he is in a position to qualify for the degree of second-class scout. The requirements and tests for this degree call for considerable training. To pass to the degree of first-class scout, much more strenuous training is required.

Of the three hundred thousand boys in the movement about one hundred thousand are tenderfoots and second-class scouts, with two hundred thousand more in preparation. There are between three and four thousand scout masters enrolled at the National Headquarters at New York.

The Boy Scouts of America as now banded together form one of the most influential organizations in the country. Almost every state in the Union has thousands

of these men in the making, who are pledged together to do their duty like men. Almost daily the press of the country recount some deed of heroism which has the scout's promise as inspiration. All over the country the youngsters are taking to the woods on camping trips — swimming, racing, wrestling, and sitting at the feet of



TAKING TO THE WOODS ON CAMPING TRIPS

Nature for wisdom. Many of them wear the picturesque scout's uniform. But there are many thousands of scouts who are going about their daily duties in crowded towns and cities, but who are none the less ready to perform whatever act of kindness or of manly daring comes their way.

“Be Prepared” is the scout's motto. Interpreted it means “Be prepared to play the *man* right.”

HELPS TO STUDY

Word Study.

Mafeking (mä'fe king) — a town in South Africa.

trebled (treb'l'd) — increased threefold.

dis patch' — a military message.

or'der ly — a soldier who carries orders for an officer.

con spic'u ous — striking, evident.

for'ti tude — bravery.

al ly' — friend.

chiv'al rous — gallant, brave, courteous, polite.

vi'o late — disregard.

pa trol' leader — the one who leads a small party.

du'ly — in fit manner.

con'sti tut ed — appointed.

wan'ton ly — recklessly.

rev'er ent — devout, respectful.

qual'i fy — to make oneself capable of holding a certain office or enjoying a certain privilege.

stren'u ous — demanding great energy.

in flu en'tial — having power.

Notes and Questions. — Where did boy scouts first show their worth? What is meant by a "hail of Boer bullets"? Who organized the boy scouts in America? What is meant by "to awaken the man in boys"? What does a boy scout pledge himself to do? Name the twelve headings of the scout law. Explain each. What is a patrol? What is a troop? What are the leaders called? How may a boy become a first-class scout? Mention some incident to show a scout's heroism. Name the pleasures that the scouts indulge in. Explain what is meant by "sitting at the feet of Nature."

WASHINGTON AS A BOY

George Washington was the son of a farmer who lived in Westmoreland County, Virginia, and who had large landed possessions on the banks of the Potomac. George was born on the twenty-second of February, 1732. While he was still a child his father moved to Stafford County, on the Rappahannock River, and George was sent to what was called a "field-school" — a sort of log house, generally with only one room, where children were taught to read and write and cipher.

When his father died, George was left to the care of his mother. But he could not have had a better person to look after him. She determined to make her boy a good man, and taught him to love God and to kneel beside her and say his prayers night and morning. She also taught him always to tell the truth and do his duty in everything.

He was very fond of riding and hunting and of games that require skill and bodily strength. These made him grow tall and strong. It is said that he once threw a stone across the Rappahannock River, at the city of Fredericksburg; and there are few men who could do as much. He kept a book in which he wrote down wise maxims; he also taught himself how to keep accounts and to survey land, which, as you will see, soon became of the greatest use to him.

When George was fourteen years of age he was a tall, robust boy, and longed to lead the life of a soldier or sailor. He thought that he should like being a sailor the

better of the two; and as his brother Lawrence was rich and influential, there was not much trouble in having George appointed a midshipman in the English navy. But his poor mother grieved at the thought that she was going to be separated from her boy and might never see him again. He had persuaded her to let him go, and she had consented, but when George came, in his fine new uniform, to say good-by, she covered her face with her hands and cried; and at this the boy gave way. He could not bear to distress his mother, and at once gave up the idea of leaving her.

He often went to see his brother Lawrence at his brother's house, called Mount Vernon, on the Potomac River, and he was a great favorite with everybody there. Lawrence had married a daughter of Mr. William Fairfax, a rich Englishman who lived not far from Mount Vernon; and here the boy met Lord Thomas Fairfax, an English cousin of William Fairfax.

Lord Fairfax wished very much to have his lands in the valley of Virginia surveyed, and he proposed that young George Washington should undertake the work. The boy at once consented. Nothing could have pleased him better. He loved the open air and horseback riding; he would have opportunity to explore a picturesque and beautiful country, full of Indians and wild animals; and he at once began making preparations for his expedition.

It was a fine day in early spring of the year 1748 when George with a companion, George William Fairfax, a son of William Fairfax, set out in high spirits. They crossed the Blue Ridge of Ashby's Gap and forded the bright waters of the river Shenandoah. They then turned a little

to the left and made their way toward Greenway Court, a sort of lodge built by Lord Fairfax in the woods. On it were two bells, which were meant, it is said, to give alarm to all the settlers in the neighborhood when the Indians were coming.

George and his friend, after a short rest, began to survey the lands along the banks of the Shenandoah River. The spring was just opening and the leaves were beginning to bud in the woods. The sun was shining brightly, the birds were chirping, and on every side as far as the eye could reach were long blue ranges of mountains, like high walls placed there to guard the beautiful valley of the Shenandoah.

The boys worked faithfully all day, and at night stopped at the rude house of some settler in the woods; or, if no house was seen, they built a fire, wrapped themselves in their cloaks, and slept in the open air. They went on in this manner until they reached the Potomac River. They then rode up the stream and over the mountains until they reached what is now called Berkeley Springs, or Bath, where they camped out as usual under the stars.

One day they were surprised by the sudden appearance of a band of Indians, about thirty in number, with half-naked bodies covered with paint, which signified that they had been at war with their enemies. One of them had a scalp hanging at his belt. One stretched a deerskin over an iron pot and drummed upon it, while another rattled some shot in a gourd with a horse's tail tied to it. While this was going on, one of the savages leaped up and began to dance, turning and tumbling about in the

most ridiculous manner, while the rest yelled and whooped around a large fire which they had built.

Several weeks were spent by the young surveyors in this wild country. They cooked their meat by holding it to the fire on forked sticks; chips served for dishes. Sometimes it rained heavily, and they were drenched. At one time some straw on which they were sleeping caught fire, and they woke just in time to save themselves from being burned.

In the month of April the two young men recrossed the mountains and returned home. Lord Fairfax was highly pleased with what they had done, and George was well paid for his work.

— JOHN ESTEN COOKE.

From "Stories of the Old Dominion," by John Esten Cooke. By permission of the American Book Company, publishers.

HELPS TO STUDY

Word Study.

ci'pher — to work sums in arithmetic.

max'ims — truths, sayings.

sur vey' — measure.

in flu en'tial — having power or influence over others.

ex pe di'tion — trip, undertaking.

Notes and Questions. — What kind of school did Washington attend? What kind of mother did he have? Give one incident showing his strength. What did he first wish to become? Why did he give it up? How did he become a surveyor? Tell how he lived in the woods. Relate the story of the visit of the Indians. What kind of life did Washington enjoy as a boy? What characteristics of Washington do you learn from this story?

CAMP FIRE GIRLS

No sooner had the Boy Scouts been organized, than a movement was started to organize girls into bands, with the same great end in view, for it was felt that if boys are to be encouraged to do manly things, girls should be encouraged to do womanly things.

In the fall of 1911, the organization of Camp Fire Girls came into being, and already many fires have been lighted. A Camp Fire is really a club with a leader who is known as the "Guardian of the Fire." Before the club can be organized, the leader must write to headquarters at New York for a license and instructions.

Many clubs have camping places in the woods where their members dress in Indian clothes and enjoy themselves in the open air, while many more pledge their faith about a tiny indoor blaze. It is the spirit and not the letter of the law which is insisted upon.

One of the most successful clubs was started in the city of New York around three candles which were named "Work," "Health," and "Love." Work, health, and love are the things which the Camp Fire Girls stand for, for the movement is designed to bring the young girls of our country back to the ennobling faith that woman's best and fullest development is to be gained through sincere service, that all work is honorable, and that woman's work finds its sweetest expression by the camp fire of the home. The law of this order sums up the ideals for which it stands as follows :



A CAMP FIRE GIRL

*“Seek beauty. Be trustworthy.
Give service. Hold on to health.
Pursue knowledge. Glorify work.
 Be happy.”*

The founders of the organization have happily grouped the ambitions and ideals of their order about the camp fire. Fire stands for home, for the circle of friendship, for hospitality, and, broader still, for the love of mankind. Through all ages it has meant comfort, good cheer, service, and worship.

The order of Camp Fire Girls comprehends three degrees: the first degree, that of Wood Gatherer, is not difficult of attainment as its obligations are few. A Wood-Gatherer wears a ring which is the symbol of this first degree, and she is also allowed to wear the modified “middy” blouse which is quite the proper thing about the camp fire.

The second degree, that of Fire Maker, is not so easy to attain. In order to become a Fire Maker a girl must learn to cook, mend, darn, keep accounts of money received and expended, and care for those who are injured. She must sleep out-of-doors or with her windows open, must take an average of at least a half hour’s daily out-of-door exercise, and must refrain from too much soda water and candy between meals. She must be able to name the chief causes of infant mortality in summer, and tell how and to what extent it has been reduced in one American community. She must commit to memory any good poem or song, not less than twenty-five lines in length, must know the words of “America,” and must be

familiar with the career of some woman who has done much for the country or state.

These requirements show the practical work of the order, while the Song of the Fire Makers gives poetic expression to the ideal on which it is founded :

“As fuel is brought to the fire,
So I propose to bring
My strength,
My ambition,
My heart's desire,
My joy,
And my sorrow
To the fire
Of humankind.
For I will tend,
As my fathers have tended,
And my fathers' fathers
Since time began,
The fire that is called
The love of man for man,
The love of man for God.”

The third and highest degree is that of Torchbearer. “That light which has been given to me I desire to pass undimmed to others,” is the Torchbearer's desire, and this bespeaks her service to the order. She is a leader, a teacher, a guide going before and lighting the way. Very few attain to this degree.

“Work,” “health,” and “love” — to these the Camp Fire Girls dedicate their young lives. All girl readers of this sketch who believe that work is honorable, that

health is a blessing, and that love is the greatest thing in the world, should strive to live the life of Camp Fire Girls.

HELPS TO STUDY

Word Study.

li'cense — a permit.

de signed' — planned.

sin cere' — honest.

com pre hends' — includes.

sym'bol — sign.

ex pend'ed — paid out.

ded'i cate — pledge.

in'fant mor tal'i ty — death of infants.

Notes and Questions — What is a Camp Fire? How can a club be organized? What is the object of the movement? What are the ideals for which it stands? Why was the name Camp Fire selected? Name the degrees of the order. What is necessary to attain the first degree? Mention some of the things a girl must know to attain the second degree. What is the meaning of the Fire Makers' song? What is the third degree? Why do so few attain this degree? To what do the Camp Fire girls dedicate their lives?



Kosa Bonheur

THE SHEPHERD AND HIS FLOCK

“THE LORD IS MY SHEPHERD”

The Lord is my shepherd: I shall not want.

He maketh me to lie down in green pastures: he leadeth me beside the still waters.

He restoreth my soul: he leadeth me in the paths of righteousness for his name's sake.

Yea, though I walk through the valley of the shadow of death I will fear no evil: for thou art with me; thy rod and thy staff they comfort me.

Thou preparest a table before me in the presence of mine enemies: thou anointest my head with oil; my cup runneth over.

Surely goodness and mercy shall follow me all the days of my life: and I will dwell in the house of the Lord for ever.

— THE BIBLE.

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