

LOST AND FOUND.

BY AN OLD CONTRIBUTOR.

In the journal of Life
That counted years deep
Of days that we labor
And nights that we sleep,
Till we to the column
Close written and cross'd,
Where glimmers the record
The "Found" and the "Lost."

Found—love true and tender,
Well-trusted for aye,
To count with the jewels
No money can buy.
Found—our courage to battle
'Gainst arrows of fate;
Found—something that's rare;
Found—courage to wait.

Found—stretches of meadow
Where sweet waters glide,
With deeper wood-shadows
Wherein to abide.
Found—tide-gathered treasures
Adrift on the sand,
From ships that came sailing,
Came sailing to land.

And what are the losses
To call and to count?
How many their numbers,
How great their amount?
Lost—beautiful childhood:
Ah! cheek cherry red,
Rest softly and sweet
Mid yesterday's dead.

Lost—hope for new brightness
My path way to cross,
Lost—faith, just a little,
Alas for the loss!
Lost—nay, I count never
As "lost" those I miss,
For they only have hidden
In that world from this.

Lost—days weak and idle,
Lost—time to do good,
Lost—heart true and tender,
Friends misunderstood;
Lost—patience through trial,
Lost—charity sweet,
To scatter fair roses
Round Error's frail feet.

But look you, O searcher,
Let other things go:
Hast found in the journey
A robe white as snow?
Hast plucked from the crimson
That Calvary knew
A Pearl that is priceless,
A Word that is true?

Hast lost any burden
Like Christian of old,
Any weakness or folly
Outlived or off-sold?
So, counting up losses,
God give us to find
Some gain underneath them,
Some treasures enshrined.

From the N. Y. Ledger.

Air and Exercise for Cows.

The following comprises extracts from an address delivered before the American Dairyman's Association at the last annual meeting by Prof. I. P. Roberts:

For the last ten to twenty years, from press and rostrum have gone forth arguments and figures without number to prove the economy of warm stables. This is well, and great good has been accomplished. Enterprising farmers are quick to see and adopt anything new that gives promise of good results. Warm stables, their good sense taught them, would give better results than cold ones. Immediately new barns were built with low, warm basements, and their entire sides were frequently of stone. The jack-screws lifted up many old barns, and low, warm stables were placed underneath. It is no uncommon thing to hear men remark with apparent pride, that it never freezes in their stables even in the coldest weather.

While all this has been going on, but little or nothing has been said as to the amount and quality of the air to be supplied to the cattle in their improved stables. Seeing the great injury done to some of our valuable breeds of animals by going to extremes in different directions, I have noted with much solicitude the results of hot stables and close confinement. Hot stables and bad air do not always go together, but they usually do, and I have been at some pains to gather facts, figures, and death records of various herds in New York and some in Iowa. I shall withhold all names of the herds referred to, as I can see no possible good in making them public.

One milk dairy that I have visited at least a hundred times in the last few years, contained, in 1877, eighteen cows. They were kept in a wooden building above ground, sixty feet long by sixteen feet wide with seven-foot ceilings. The hay was kept in the loft preventing any escape of air in that direction except through a small hay scuttle. The walls were lined on the inside, and the space between the inner and outer walls completely filled with straw. Four small windows about two feet square and a four-foot door, constituted the sole openings; at night these were usually closed. It mattered little how cold it was outside, it was always above freezing inside. The herd was liberally fed, and well cared for, and yet on an average nearly two cows per year succumbed to tuberculosis, and no wonder, for they had but six thousand seven hundred and seventy-three cubic feet of air space, or three hundred and seventy-three cubic feet per cow. Imagine seventeen men sleeping and living for twenty-three hours out of twenty-four in a room ten by twelve feet with nine-foot ceiling, and you get some conception of the unhealthy condition that surrounded this herd. Two years since the herd was placed in quarters giving about four times the air space per animal that they had formerly; the result is that not a single animal has been afflicted since.

A herd of valuable shorthorns with which I am well acquainted, some five or six years since were kept in warm, close stables, and tuberculosis was so common that the owner of the cattle became alarmed; well he might be, for not only were some mature animals diseased, but also quite a per cent. of the young calves had a chronic diarrhoea more or less severe. He now keeps the heifer, in a well-protected, open shed; the cows are turned out about eight hours daily and the barn is thoroughly aired; the stables in which the young calves are kept is now enlarged and better ventilated, and the result is uniformly healthy animals.

Four years since I made a visit to a gilt-edge butter dairy in — county. Twenty-six animals, mostly grade Jerseys, were occupying a new stable, forty by twenty-four, with six feet eight inch ceiling. This gave two hundred and forty-three cubic feet air space per cow. Every animal, when led out for our inspection, was taken with what appeared

to be a severe attack of the ague, though it was only moderate winter weather. The stable was above ground, and not very warm, the air damp and insufferably foul. Allowing that a cow requires six times as much air space as a man, and taking this stable, where each cow had two hundred and forty-six cubic feet of air space, as a basis from which to figure, it would be equivalent to confining twenty-two men in a room ten by twelve feet.

Another basement barn visited this winter was 58x90 feet, ceiling 8 feet—14,000 cubic feet. This would give to the thirty-six cows kept in it 361 cubic feet air space per head, or one-half as much air space as is allowed a British soldier. There were six windows in this barn, 1x3 feet, and one door, all closed. Another barn that had been built at an expense of some \$8000, had in the basement, which was 11x33x8 feet, arrangements for fifty-seven cows. This would give 542 cubic feet air space per animal. One entire side has no opening whatever; the other sides had six small windows and three doors, all closed. Though this stable had more air space per animal than the one previously mentioned, yet the air was more foul. This points to a fact often overlooked; that a large building is far more difficult to properly ventilate than a small one.

Some of our advanced dairymen get quite excited over the brutality of stanchions, but seem to entirely forget the weightier matter of pure air, and permit their cattle to be kept in a stable that excludes the air about as effectively as an ordinary farm house; 47-48 of the time with an allowance of one-third as much oxygen as is required by a man, when they should have about six times as much; or, in other words, the homocopathic dose of 1-18 of a nominal indoor supply is allowed them. Six hundred cubic feet is allowed a British soldier in permanent barracks, 400 cubic feet in wooden huts, 1200 cubic feet in hospitals at home, 1500 cubic feet in the tropics. Our best horse stables have from 1200 to 2400 cubic feet per horse, with all possible appliances for ventilation. But the cow that furnishes the food for ourselves and children is confined in a room with her voiding, with doors and windows tightly closed for twelve consecutive hours, and with an allowance of from one-fourth to one-eighth of the proper amount of air. Were it not for the air that penetrates even stone and brick walls and through the fine cracks, the animals would not survive a single night. Is it not possible to have even large stables moderately warm and supplied with air that is at least moderately pure? Perhaps ninety out of every hundred stables are well ventilated; most of them too well, and the cry of warmer stables that has been ringing in our ears for the last few years will have to be repeated many times without doubt; but as in all progressive movements, there is danger of overdoing this warm "boom," for cold stables with healthy animals are far better than warm ones with diseased animals.

I have purposely left out detailed statements as to the time required in some of these warm, tight stables—provided the air were pure when the cattle were put in it—for it to become foul and loaded with noxious gases, because no accurate statement can be given; but we have enough data from reliable sources to warrant us in making some general statements, which may be briefly stated as follows:

For every pound of live weight at least one cubic foot of air space should be allowed, and the air should be changed three times per hour. The cracks and small openings left in buildings will accomplish much of this change, but in tightly-constructed buildings it is well to make provisions for the introduction and escape of at least two thousand cubic feet of air for each animal per hour. Care should be taken that no strong drafts are created; but it is almost impossible to ventilate properly and avoid them, where buildings have on two or three sides a heavy bank of earth resting against the basement wall.

There are two ways to get ventilation and light in these basement structures; the first and better is to construct the building on a higher level, so that fair-sized windows may be placed in all sides; the other and more expensive one is to build ample areas around the windows, or a retaining wall from two to three feet from the basement wall. I notice the latter method has been used in two or three fine barns that have been built the past summer.

I have spoken frequently of windows as ventilators, because by them the ingress and egress of air is secured, and at the same time light is provided. A window with upper and lower sash, made and fitted as carelessly as they usually are for barns, though closed, permits the passage of quite a volume of air, and if a board about one foot wide is fastened across both the bottom and top, and one sash raised and the other lowered a little, we have about as good a ventilator as can be constructed.

Practically speaking, no amount of care can prevent the air from becoming somewhat vitiated, nor can any amount of care in ventilation or feeding be substituted for a moderate amount of exercise in the open air. It would seem almost superfluous to recommend moderate exercise as a promoter of health, vigor, longevity and digestion. Did not some of the teachers I have referred to persist in teaching by precept and practice just the opposite; and because "judgment is not executed speedily," they appear to think it will be postponed indefinitely. Tie up and cease to use one of our limbs. In a few weeks it becomes partially paralyzed and much weakened. We tie up our cows for months, yet wonder that they abort and die of consumption. Pure air and exercise will not totally banish disease from our herds, but in primitive times when they had an abundance of both diseases were far less frequent and fatal. I would not by any means return to the bleak barn-yard, and strawstack; but I would, by intelligence and forethought, study to provide not only warm stables but healthy ones; and while aiming to secure a large flow of milk, I would not do it at the expense of the animal or its future offspring.

Son, to his father, who has asked him where he is in his class now: "Oh! pa, I've got a much better place than I had last quarter." "Indeed! Well, where are you?" "I'm fourteenth." "Fourteenth! lazy bones! You were eighth last term. Do you call that a better place?" "Yes, sir. It's nearer the stove."

ELEANOR'S LESSON.

She sat paring peaches for tea, on the porch at the side of the old Carlton farm-house, in Wellsville, a smart little country village in Western Pennsylvania, that was trying to make itself into a town.

A neatly dressed and pleasant faced girl at eighteen, was Eleanor Morse Carlton.

A girl, moreover, who should have been contented with her lot, as the only child of a kindhearted widow, and the betrothed bride of the finest young man in Wellsville.

But Eleanor was not content. She had not yet learned the sweetness of home, domestic things, she did not yet know how blessed she was in having won the true love of a noble man.

As she sat over her peaches she made a pretty picture.

A dark-faced, romantic-looking young gentleman, with great black eyes and a heavy moustache, leaned over the garden gate, and looked at her, admiringly.

Eleanor looked up. Her gray eyes caught that glance, her pink cheeks deepened into rose color. The stranger lifted his hat respectfully, and passed on.

Eleanor's eyes followed him. He turned into the Widow Fearing's garden walk, and went up to the house with an assured step.

"It must be Cousin Reginald, just arrived from Brazil, of whom the Fearing's have had so much to say of late," thought Eleanor.

Jessy Fearing had grown eloquent in describing his "dark, mysterious beauty," as she called it. Eleanor had laughed at her, at the time; but now she owned secretly that "the half had not been told her." Reginald Fearing certainly was magnificently handsome.

And what a strange glance he had fixed upon her!

"How would life seem," mused Eleanor, "if one had a lover like that—gallant, picturesque, full of romance and poetry—instead of Rudolph Heisinger?"

At that moment a tall, strongly-built young fellow of twenty-two, whose blue eyes and golden hair, and frank, blonde face, betrayed his German parentage, came round the corner of the house.

He was in his shirt sleeves. He flung himself with his straw hat, as he sat down on the step at Eleanor's feet, and stole a handful of quartered peaches from the dish beside her.

"Nelly, the basket-pie is to be at Mrs. Fearing's next," he said, "to introduce that cousin of theirs to all of us, you know. It is next Wednesday afternoon. How early can you be ready?"

"I—I don't know," stammered Eleanor. "I don't think I care to go."

Indeed, she did not. Go there, to be introduced to the owner of those eyes, and to be known to him, through good-natured gossip, five moments later, as Rudolph Heisinger's "intended!" Rudolph looked astonished, and also very much disappointed.

"When you try to go," he asked, "and when she made some blushing excuse, far worse than silence would have been, an ugly frown came over his good-natured face."

"I can't understand you, of late," he said, impatiently. "What is wrong?"

"Everything," said Eleanor, suddenly plucking up spirit. "Don't you think we have made a great mistake? I am fond of you—very fond; but I doubt if I love you well enough to marry you, Rudolph!"

"You didn't say so three months ago," said the young man, rising to his feet, and looking very pale and stern. "And now that I have looked forward to it so long—now that I have altered the whole house to suit you—now that our wedding day is fixed, and all the neighbors know it—to say that you don't love me now! You are a cruel, heartless fiend, Eleanor Morse! and whatever happens to me, after this, will be all your fault, remember!"

He was gone!

He had left her in anger—left her forever, no doubt!

Eleanor felt an odd, painful contraction for her heart as she watched him striding down the road that led to the Heisinger meadows.

"Are you there, alone in your glory, Eleanor?" called out a young girl's voice. "May we come in? Reginald does so wish to see you!"

It was Jessy Fearing and her handsome cousin.

Eleanor hastened to invite them in. But the evening seemed strangely cold, and silent, and dismal, to her.

Reginald Fearing had been an extensive traveler, yet she only thought him egotistical, when he related story after story of the wonders that he had seen in foreign lands.

He was disposed to admire her; but she gave him no encouragement. She scarcely listened to his compliments. She thought him silly when he laughed or smiled, and all over and through their conversation the sick thought throbbed the while.

"Rudolph has left me! Rudolph will come no more!"

At last her guests left her, when tea was over, and Eleanor went to her own room, and looked at the moon until she wept herself to sleep.

She said to herself, that she would surely beg Rudolph's pardon, when he came again.

But Rudolph did not appear on the next afternoon. Another sun rose, brightened and set, but still no tidings of him.

But the third day, Eleanor was nearly ill. Only her pride kept her from going to Rudolph's home.

summer "toilet," that cast all the mus-

lins and gingham of the belles of Wellsville completely into the shade.

It was his cousin Greta Heisinger, the daughter of a rich city merchant, Eleanor was told by her girl friends, who watched her curiously to see how she bore Rudolph's desertion.

They knew nothing of the "lovers' quarrel," and supposed that the superior fascinations of the city beauty had lured the young man from his allegiance for a time.

Rudolph certainly appeared to be entirely devoted to his fair charge—so much so, indeed, that he failed to see Eleanor when she passed near them, with a bevy of girls on her way to the woodland lake.

She bit her lip and the color flushed into her cheek and the light into her eyes.

She was superbly beautiful, in her wounded love and pride. And ever beside her, with his handsome dark face, and his graceful foreign ways, was Reginald Fearing. She had, at least, won that one triumph over her city rival. Reginald had neither eyes nor thoughts for any one except herself.

They stood on the bank of the lake, while a party embarked in the flat-bottomed boat on an expedition after water-lilies.

Suddenly a terrible crash sounded through the forest, and a woman's shriek pealed through the air.

Jessy Fearing came running up to them. She looked faint and pale.

"Go, run—bring a doctor, Reginald!" she gasped. "The great swing has fallen, and Rudolph was in it. He saved his cousin, but he looks as if he was dead. Fly, Reginald, as fast as you can go, to the village, and bring a doctor here."

With a wild cry of love and fear, Eleanor darted through the forest, and fell on her knees by Rudolph.

She caught him in her arms; she would let no one come near him.

"It is all my fault!" she sobbed aloud. "If he dies without forgiving me, I shall die too!"

The blue eyes opened and looked at her lovingly through all their pain.

"Do forgive you and I love you!" he whispered, as he bent her hot face down on his.

And the city cousin stayed for the wedding, which took place as soon as Rudolph's broken arm was strong enough. Then she went home for the winter season. But young Mrs. Heisinger did not envy her. She had learned at least, to be content.

Man.

The average weight of an adult man is 140 lbs. 6 oz.

The average weight of a skeleton is about 14 lbs.

Number of bones, 240.

The skeleton measures one inch less than the height of the living man.

The average weight of the brain of a man is 3½ lbs.; of a woman 2 lbs. 11 oz.

The brain of a man exceeds twice that of any other animal.

The average height of an Englishman is 5 ft. 9 in.; of a Frenchman, 5 ft. 4 in.; of a Belgian, 5 ft. 6½ in.

The average weight of an Englishman is 150 lbs.; of a Frenchman, 138 lbs.; and of a Belgian, 140 lbs.

The average number of teeth is 32.

A man breathes about 20 times in a minute, or 1200 times in an hour.

A man breathes about 18 pints of air in a minute, or upwards of 7 hogsheads in a day.

A man gives off 4.08 per cent. carbonic gas of the air he respires; respires 10,666 cubic feet of carbonic acid gas in 24 hours; consumes 667 cubic feet of oxygen in 24 hours, equal to 125 cubic inches of common air.

A man annually contributes to vegetation 124 lbs. of carbon.

The average of the pulse in infancy is 120 per minute; in manhood, 80; at 80 years, 60. The pulse of females is more frequent than that of males.

The weight of the circulating blood is about 28 lbs.

The heart beats 75 times in a minute; sends nearly 10 lbs. of blood through the veins and arteries each beat; makes four beats while we breathe once.

540 lbs. or 1 hogshead 1½ pints of blood pass through the heart in one hour.

12,000 lbs. or 24 hogsheads 4 gallons, or 10,782½ pints pass through the heart in 24 hours.

1000 oz. of blood pass through the kidneys in one hour.

174,000,000 holes or cells are in the lungs, which would cover a surface 30 times greater than the human body.

Longfellow's Residence.

Mr. Longfellow's stately dwelling, Craige House, occupied, as every one knows, by Washington at the siege of Boston—("This," said the poet, laughingly, to some visitors, "is the headquarters, and the houses which he occupied during his retreat were the hind-quarters")—has yielded more to the prevailing suburban style of its neighbors than Elmwood or Shady Hill.

It is fitting enough that it should, since by reason of its distinguished owner's accessibility, his constant and varied hospitality, and his social position, it forms, perhaps, the strongest connecting link between society and literature in or about Boston. The days follow in this old colonial mansion, whose heavy brass door knocker is plied (or more often gazed at by a deteriorating generation, in ignorance as to the mode of handling it) by a long stream of pilgrims of high and low degree, drawn by reverence, or but across the street a piece of pastureland with some cows munching among the clover and buttercups, and a vista of the sliding Charles and Brighton meadows beyond—upon which the poet can look from behind his magnificent lilac and lofty elms—still keep the rural aroma in the air he breathes—[Harper's Magazine.]

Gov. Long, of Massachusetts, has almost as many engagements as General Grant. The Boston Journal says: "The Governor had a busy day on Wednesday. He was occupied all the forenoon with state house duties, spoke at Medford in the afternoon, in the evening he dined at East Boston, and wound up later by some timely words to the Yale alumni at the Revere. He probably finished the day by translating a few passages from Homer."

Charlie Ross.

At seven o'clock of the morning of January 20th, the massive gates of the Philadelphia Penitentiary swung open, and a man of medium height, with dark hair and whiskers, emerged carrying a bundle. Casting a furtive glance around he walked down the street, and entering a restaurant, called for something to eat.

He was very particular in choosing his meal, and frequently consulted the bill of fare before he could make up his mind. Of all the loungers in the saloon none recognized in the stoop-shouldered and retiring stranger, William H. Westervelt, who, on October 3d, 1875, was sentenced to seven years' imprisonment on the charge of conspiracy to kidnap and imprison Charlie Ross and extort ransom money from his family.

Subsequently he was met by a person who recognized him, and over a social cigar, Westervelt recounted the story of his connection with the famous abduction case and the manner in which he was arrested in this city. "I tell you," said he, "I have just come forth from a living death; for, although I was treated with the utmost kindness up above, there are no words to describe the frightful experience a man goes through there."

As he spoke his dark eye flashed and his whole frame trembled with excitement.

"Do I think Charlie Ross is dead?" said he, in answer to a question. "Why should I? I have never heard of his death, and neither have you. If the people who had him were enabled to keep him for several months without being discovered, why couldn't they have kept him for years just as safely? Why, he might be in one of the foundling asylums in New York City, and who would be the wiser? The police have never searched these, and if they did they might not find him."

Westervelt was dismissed from the New York police force in 1874. Said he: "After that I came on to Philadelphia, and lived in the same house with William Mosher, who had married my sister, and a young man named Joe Douglass. I sold gas burners, which I received from a New York factory. Mosher peddled moth powder, and Douglass did nothing. I tried to get any kind of work, but failed, and went back to New York."

Finally Superintendent Walling, of the police, got me a position as conductor on an Eighth Avenue car. This was in September, 1874, and Charlie Ross was stolen in the early part of July, the same year. When I was in New York in August, 1874, Superintendent Walling sent for me and told me he had information that Bill Mosher and Joe Douglass had stolen the boy. It appears that Gil Mosher, Bill's brother, who has since died, called on Walling and told him that some time previously he and Bill had had a conversation on the subject of kidnapping some rich man's son, and he believed from the circumstances of the case that were published that they were connected with it. Gil was on bad terms with his brother, on account of a robbery at Freehold, N. J., in which they participated and had a quarrel over the spoils. Gil told on Bill and the latter was arrested, but escaped and came to Philadelphia, where he lived under the name of Henderson. Walling wanted to know where he lived and everything about him, and I told him and helped him to work up the case. Detectives were sent over here from New York, and they found everything just as I told them."

"Why were they not arrested?" was asked.

"Well, that I never knew. Anyhow, they both came to New York, and were not molested. On December 14, 1874, Judge Van Brunt's house, at Bay Ridge, Long Island, was broken into, and Mosher and Douglass, the burglars, fell mortally wounded. Mosher died in a few minutes, but Douglass lingered for some time, and made a sort of confession, in which he said that they were the abductors of Charlie Ross, and Walling had them at last, or something like that."

Westervelt was then arrested and tried as an accomplice, and sent to the penitentiary, although he claims he was innocent. Said he to-day: "I shall now try to investigate a clue to the abduction that has never been properly worked up. If Mosher and Douglass did steal the boy there must have been a third person who took care of him, and I have my suspicions." Westervelt probably knows more about the case than any other man.

Four Sons in Prison.

One of the saddest scenes ever witnessed in the Missouri penitentiary transpired a short time since. A mother met four of her sons wearing the striped suits as convicts within its walls. Their names and crimes, as recorded on the penitentiary rolls, are: James Greenwade, aged 30 years; ten years for robbery; received last Nov. 30th. Luther Greenwade, aged 26; seven years for robbery and larceny. Breckinridge Greenwade, aged 25; seven years for robbery and larceny. Henry Greenwade, aged 20; ten years for robbery and larceny.

The father and mother of these men live in Jefferson, near Mount Sterling, Ky.; keep a hotel there, and are tolerably well-to-do in life. Four or five years ago the elder brother came to Missouri and bought a farm near Butler, in Bates county. The younger brothers followed soon after, and the four lived together on the place, the oldest being married. Neighbors looked upon them as people of means and respectable. For two or three years all sorts of devilment was perpetrated in and about Butler. Persons were waylaid and robbed by masked men. Mails were rifled, burglaries were committed, and hogs stolen. At length suspicion centered on the Greenwades, and they were watched by officers and citizens, and at last caught "dead to rights." Mail pouches, cut open and rifled, were found in the cellar, and other stolen property on their premises. Conviction was easy, and they were safely landed in the penitentiary. At the time stated the mother, hearing her sons were in trouble, posted in haste to Bates county, only to learn that they had all been convicted of crimes and taken to the State Prison. With her daughter-in-law and the latter's two children she reached Jefferson City and at once proceeded to the penitentiary. The meeting with her sons was terribly affecting, and it is asserted Deputy Warden Bradbury for once in his life gave way to the melting mood.

"My God," she exclaimed, "that a mother should live to see four of her beloved boys in such a place."

The officials were kind and tender to the afflicted ones, but they had at last to use force in separating the mother from her sons and induced her to leave them after a visit of three or four hours.

Mrs. Greenwade is a woman of not over 50 years in appearance, well-mannered, strong-minded and intelligent; but that fearful realization was more than her mother's heart could bear unmoved and she gave vent to her shame in a manner more affecting than was ever before witnessed within the prison walls. She left for her Kentucky home taking her daughter-in-law and children with her.

There is one more son who will doubtless never disgrace his name for he is a minister of the gospel in good standing. One of the convicts is in the prison hospital.

The Locust's Lair.

A Washington dispatch of the 27th ult. says: The periodical visitation of locusts will take place this year. Prof. Riley, of the entomological commission, in an interview to be published in The Post to-morrow, says there are two broods of locusts. One appears every thirteen years, and the other every seventeen years. By a coincidence both broods are to appear together this year, but not in the same localities.

"In what localities?" was asked.

"The seventeen year locusts," the professor replied, "will be particularly plentiful in Marquette and Green Lake counties, Wisconsin, and may also appear in the western part of North Carolina, in northeast Ohio, and a few in Lancaster county, Pennsylvania, and Westchester county, New York. They will also be abundant in the neighborhood of Wheeling, and will probably extend down into Maryland, Virginia, and the District. Of this, however, I am not quite sure. The thirteen-year brood will in all probability appear in southern Illinois, throughout Missouri, with the exception of the northwestern corner, in Louisiana, Arkansas, Indian Territory, Kentucky, Tennessee, Alabama, Georgia, and North and South Carolina."

"What is the difference between these two broods?"

"Do you mean in appearance? Very little, and one is very apt to confound them."

"Are locusts to be depended upon as recurring at regular periods?"

"Yes, sir. Observations extending for more than two hundred years prove that they never fail. The earliest appearance of the periodical cicada, or locusts, so far as we have any record, occurred at Plymouth, Mass., in the year 1634. Each seventeenth year they have appeared without fail. The naturalist calculates as confidently on the future appearance of the locust in a given month in a given year for all time to come as the astronomer does an eclipse or a transit on some particular day, and he may go back to the time when none but savage men dwelt on this continent and feel confident that the woods of New Jersey rattled with the hoarse cry of this insect in the month of June, seven years after the birth of Christ, just as they did in June, 1877."

"Where does the locust reside, so to speak, during his absence from the face of the earth?"

"He is then under the earth, in the shape of a worm, living on the sap of young rootlets. In following these they penetrate very deep into the ground, sometimes going as far down as ten or twelve feet. The season for their appearance and disappearance differs somewhat with the latitude, though not so materially as one would suppose. They appear a little earlier in the south than in the north; but the last half of May can be set down as the period during which they emerge from the ground in many parts of the country, which they generally leave by the 4th of July. As is the case with a great many other insects, the males make their appearance several days before the females, and also disappear sooner. Hence in the latter part of the cicada season, though the woods are still full of females, the song of but very few males will be heard."

"Do not the females sing?"

"No. Musical organs are possessed only by the males."

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