

How a Locust Changes Dress.

James Speed Tells of the Transformation of Humming-bird's Food.

Each Summer and early Fall many trees have their trunks dotted with thin, brown shells of locusts. From a point near the middle of the back to between the eyes each shell has a split—plainly shown in one of the illustrations.

Almost all of these insects undergo their metamorphosis at night. The apparent reason for this change only after darkness sets in is that the locusts may escape injury or death from enemies while they are soft and unable to move.

Last Summer I found a grub just as it emerged from the ground near the foot of a large maple tree. It walked slowly and with seeming difficulty; and no wonder, its whole existence having been passed down in the dark ground where it was busy sucking the sap from the tree's roots. I was anxious to see the whole change, and as it was late in the afternoon, I carried the grub into the house and allowed it to climb up a twig which I placed in a bottle.

When it reached the top of the twig, as shown in the first photograph, unable to go further, it carefully fastened its sharp digging claws into the wood and remained perfectly still. Then it was I obtained this photograph. I wanted to get a whole series of photographs of the change, but at night cannot do so.

While examining the grub I overturned the bottle. It fell off, I tried to replace it and found that it had lost the power of using its legs. I fastened it back the best I could and watched it closely, as I knew it must be about ready to change.

Presently the skin split down the back and across between the eyes. Gradually the split widened, and between the dirty brown skin of the grub a tender green showed the perfect insect within. In a few minutes the insect had its head clear of the old shell and it made a slow forward and backward movement to free itself. As the body emerged from the old shell, evidently to free its legs from the hardening envelope.

In an hour and a quarter the locust had got out of its old body and was expanding and trying its wings for flight the next morning. Gradually the tender pea green of its body changed to dark olive as it hardened with exposure to the air. I was much interested in watching this wonderful transformation. It showed how strangely instinct gives all life the impulse to do certain definite things.

In the third photograph is shown the locust as it appeared the next morning with its wings fully expanded and ready for flight. And between the locust's body and abdomen were two thin, yellowish plates fitted for making the strange whirling noise with which he woees his love.

In writing of this insect I have used the common but erroneous name locust. It is really a cicada. The locust proper is a grasshopper. But in this country the name locust is so commonly used for this cicada that it is probably permissible. The photographs are of the two-year cicada. The other which we have is the 17-year cicada, or 17-year locust.

The common two-year locust's grub stays in the ground and does not attain its full growth for two years. The 17-year locust requires 17 years under the ground to obtain its growth. In the South, the Summers being longer, they only require 17 years for their full growth.

A dash of emerald in the strong sunlight, a drowsy whirling of wings and a slender body poised just under the hanging clusters of the honeysuckle blossoms. Carefully the long, slender, curved bill probes each blossom. Some one moves, and it is gone—a glint of green in the Summer air.

From watching these tiny bits of bird life as they sip the sweets of flowers, I have grown to the popular idea that they live exclusively on this diet. For a long time I never saw humming birds feed on anything but nectar, so I too, shared the popular belief.

My eyes were opened one bright Summer morning when, as the sun peeped over the eastern hills, the valleys were draped in mist. Each small spider web was a silver cloth of mantling weed, shrub and tree. I was sitting looking into a group of cedar trees, which stood in the yard, when my attention was attracted by several ruby-throated humming birds darting about. For a few moments I was unable to understand what they could be doing in the mist, as the latter bore no blossoms for them to visit.

By this time I had become deeply interested in their seemingly erratic movements as they darted in and out of the dense green foliage. I walked out and stood immediately under the trees and watched. A humming bird, rubbing its wings, came just over my head and appeared to fly through a delicate web. It suddenly backed, and a dew drop was shaken. It repeated this maneuver again and again, and each time it deftly picked the tiny spider web from the center of the web.

Since then I have seen a humming bird feeding on spiders quite often. I find they are fond of catching them early in the morning, while they are heavy and dull with the chilly dew.

Quite often some one will ask, "How do squirrels break nuts?" If the walnuts under a tree

where a squirrel has its nest are examined, it will be seen that they have two small holes drilled in each side. The instruments which can bore into the hard shells of seasoned walnuts must be strong and well adapted to their work.

The front teeth of squirrels are indeed wonderful chisels and cut into the walnuts with great rapidity. You have often seen squirrels sitting on their hind legs busily engaged cutting into nuts, but no doubt you have never seen how the teeth are formed to do this work.

In man's teeth the soft dentine is in the interior, and composes the greater part of their bulk. It is covered with the hard, strong enamel which protects it from wearing away in chewing. The enamel on the squirrel's tooth is all on the front and the dentine makes up the rest of the tooth.

When a squirrel cuts with its sharp teeth the soft dentine wears away faster than the hard front of enamel, and the top of the tooth is chisel-shaped, lower in the rear and coming to a sharp edge in front. Thus a squirrel really keeps its teeth sharp by using them.

NOTABLE PETS OF BIG FOLK.
What the Roosevelt Youngsters Have Brought to the White House.

The advent of the Roosevelt children in the White House brings to Washington the most notable array of pets which have found a home in the National Capitol since the days of President Cleveland. Then the young people of the Roosevelt family traveled from their home, Oyster Bay to Washington they were accompanied by Jackie, the black-and-tan dog which is the pet of the entire household. Five Maudslayi dogs, from the Aberdeen setter, follow at an early date, and it is predicted that ere long a goodly proportion of the Roosevelt "menagerie," which includes cats, dogs, rabbits and guinea pigs, will be transferred to the White House.

When President Cleveland's children lived at the White House the house was overrun with birds and animals. There were all sorts of dogs, from pointers to a big St. Bernard, several cats, a canary and a monkey, which is reported to have been on very bad terms with the members of the feathered brood. Mrs. McKinley, while she lived at the Executive Mansion, had only two pets—a cat and a mockingbird, which she brought from Canton. For several years past the basement of the White House has been inhabited by a large cat of very common-place appearance. One morning some months since the colored men who have charge of the lower part of the Executive Mansion found five pretty little black and white kittens nestling on a warm, soft bed made from an old coat, while the old tabby guarded them with jealous care.

Senator Dewey has a green parrot which can pour forth a medley of sailor talk which will astound a landsman. John R. McMillan has a shaggy dog, which has a cow of which he is as fond as a boy would be of his first pet. General Miles has two of the most comical dogs in Washington—a pair of solemn looking pugs named Nip and Tuck. All the children in the neighborhood know these dogs, and in days gone by, before they attained to such advanced age, they constantly indulged in the most grotesque antics of which any canine was ever guilty.

There are some marvelously intelligent dogs in the distinguished canine assemblage. Senator McMillan has a shaggy looking bulldog named Victor, which probably gets into more trouble than any other animal in Washington. It all comes from his fondness for music. Whenever he hears a band or a horn orchestra playing far down the street he is off at a bound, and he will follow a procession for hours unless apprehended by some watchful attendant. Victor is a great fighter and well deserves his name.

Another confirmed runaway is Jacko, the bright and saucy fox terrier owned by Postmaster-General Smith. He has an excellent home, but he seldom remains there longer than two weeks at a time. Occasionally he comes home of his own accord, not infrequently unkempt and bedraggled, but more often it is necessary to offer a reward to secure his recovery. Mrs. Perry S. Heath is the proud possessor of one of the best track dogs in Washington, and Lord Pauncefote, the British Ambassador, has a dog named Briton, which he is very proud. One of the handsomest cats at the National Capitol is in the possession of the little black-eyed daughter of Senator Celo, the Minister to this country from Costa Rica. Perhaps, after all, however, the funniest dog in Washington is Moustapha, owned by the Assistant Secretary of State. The canine is a fine fellow, with big, innocent eyes, but he has driven all the servants in the neighborhood to distraction by ringing electric bells by pushing the buttons with his nose.

The Boy With the Pony.
Most every day a little boy comes drivin' past our house
With the sweetest little pony—just the color of a rose.
And a groom rides close behind him, so he won't get hurt, you see,
I was glad he had the pony and the cart belonged to me.

I used to watch him from my porch and wish that I could own
His pony and his little cart, and drive out all alone.
And once when I knelt down at night I prayed
The Lord that he
Would fix it so the pony and the cart belonged to me.

But yesterday I saw him where he lives, and now I know
He never goes out walkin'—'cause his legs are withered so—
And last night when I was kneelin' with my head on mother's knee,
I was glad he had the pony and the cart instead of me.

—Chicago Record-Herald.



FIGHT WITH A CINNAMON BEAR

More Adventures of a Party of Boys in the Blue Mountains of Eastern Oregon.

The morning broke in the Blue Mountains, finding the four young hunters, Frank Joplin, John Winters, Stub Jones, and Silas Usher, making a royal breakfast of hot coffee and a big pan of trout that Silas had quickly jerked out of Rock Creek.

"You're all right, Silas," said Stub, who was inclined to make sport of him for being tired the day before by the she bear. "Next time you see a bear just shoo him away from your gun on the ground. That's the way all great hunters do, you know."

"Shut up, Stub," replied Silas, "you would have climbed, too, if a big bear was reaching for your coat tail, as this one did mine."

"O, you fellows have said enough," explained Frank, "get the horses fed, Stub, you and Silas. John, how do you feel after the swipe the bear gave you?"

River. At the time the boys made their expedition the country was wild and covered with a dense growth of pine and underbrush. Here all kinds of game abounded, and it was, in fact, a hunter's paradise.

They followed Rock Creek to where they had slain the bear on the previous day. From this point they took an easterly course, pushing their way up the sides of the cañons and over the rugged cliffs as only pioneer boys could. Pinto came along as easily as the boys.

On one of the open cliffs Silas spied three antelope. Slipping from his saddle, he crawled around the bluff to within 300 yards of the graceful, timid creatures, took careful aim and fired. The leader sprang into the air and then dropped. With a yell Silas ran forward. The antelope was again on his feet and trying to follow the other two, when Silas fired again.

sun never penetrated. They went on and plunged into the fastnesses of the mountains, in which a few years ago a man from La Grande entered with his dog. The dog returned alone, and the skeleton of the man was found some 10 years afterward. But the four youngsters were gritty, made of the pioneer stuff that knew no such thing as fear in their hearts of any living thing. Silas carried a Spencer carbine, and the other three heavy Winchester, and all were past masters in their use.

"We will again divide up, boys," said Frank, "and meet again this evening at a point to the southward back of the mountains and east of Powder River Valley. The signal for help will be three shots."

These arrangements having been made, the party divided. Silas and Stub went together, while Frank and John started



TEDDY ROOSEVELT, JR., ON HIS PET PONY.

All right, are you? Good. There'll be some fun before the week's out."

The two horses were fed and picketed on the hillside to graze on the high bunch grass. Frank said they would have feed enough there to last them two days if anything should happen to prevent the hunters' return.

The two bear cubs were then looked after. Silas fed them some berries and chunks of meat. He almost wished now that their mother had not been killed, as he looked into their frightened eyes, but he lost his sympathy when one of the cubs reached out and clawed his hand.

Frank packed the pony, Pinto, for the trip to Sheep Creek, a stream about as large as Rock Creek. Rock, Sheep and Beaver Creeks head up toward the old Wolf Creek mining district, east of the Powder River Valley, and not many miles from the head waters of Grand Ronde

bringing him down for the last time. The exploit told Silas in fine spirits, as an antelope is one of the most wary of animals, and the disgrace of being chased up a tree by a bear was wiped out. They packed the animal on Pinto down to Sheep Creek, where they had a fine dinner of roast antelope.

"Now, boys," announced Frank, "we're going to have a fine time of it, or I'll miss my guess."

"This is the finest hunting ground in the whole State of Oregon. There's cinnamon bear here, and Doc Curtis told me he had seen grizzly and panther many a time while on his way to the head of the river. Fill up the magazines of your guns and see that everything is in working order. It's no time to fix a gun when a bear or mountain lion is after you."

Although late in the Fall they found snow down in the deep cañons where the

off in another direction. Expectation was high that they would have exciting times, and they were not disappointed. Pinto was picketed on Sheep Creek, where he could have access to water and grass.

Then both parties disappeared in the pine timber, to meet again under very different circumstances. They expected to spend the night together at the appointed meeting place.

Frank and John moved cautiously up the east side of the cañon of Sheep Creek. After traveling about a mile they saw the tracks of a monster bear.

"Jerusalem!" exclaimed Frank, "those tracks are whoppers. The bear is bigger than the one we got yesterday. Guess we'd better let him alone."

Scarcely had Frank finished speaking when John called out:

"Why, there's a mule in the brush just ahead."

But Frank's quick eye discerned that

it was not a mule, but an immense cinnamon bear. The animal had not seen them, being busily engaged in eating huckleberries and good judgment should have warned the lads to let him alone. Possibly, though, they were not blessed with this good quality.

First they collected saplings near by, so that they could climb out of reach if hard pushed. They were 100 yards from the monster bear. Carefully they crawled to a big log, and cautiously pushed the muzzles of their guns over it. Unfortunately, John moved a bush, making a slight noise. In an instant the bear rose on his haunches and looked in the direction of the noise. They could see his immense body and wished that they had not molested him, but it was too late to retreat now.

Whispering to John to aim back of the bear's shoulder, Frank prepared to shoot at his head.

"Be cool now and aim carefully," he warned. "Our lives depend upon our killing or crippling the bear. We'll climb the trees if we can't stop him with bullets. Are you ready?"

"Yes," replied John, who was wishing that he was safe at home in his mother's kitchen. But he set his teeth hard together and took careful aim at where he thought brain's heart was located.

"Ready now," said Frank.

Both fired together. Following the joint report, there was a roar and mighty thrashing in the brush. The bear was hard hit, but not killed. He started at once in the direction of the two boys, who were now climbing the trees to escape.

They aimed wildly and only added to the fury of the bear.

"To the tree, quick," exclaimed Frank, seeing that the bear would be on them in an instant. They rushed to the top of the trees at the same time. John dropped his rifle as he turned to run, and had not time to pick it up. Frank gained his feet just as the bear reached the top of the tree and swung up on the lower branches the angry brute struck at him and tore his rifle from his grasp.

Seated in branches of the slender saplings, the position of the two boys was a perilous one. They were hardly out of reach of the tail animal, who charged first after one and then the other. Save for a small pistol the Frank carried in his belt, both were unarmed. The bear was perfectly infuriated with his wounds, and shook the saplings with such tremendous force that the boys could hardly hold on as the trees creaked and swayed. They heartily wished they had left the bear in his enjoyment of the huckleberries. He would reach far up toward them with his huge paws and succeed in tearing out in Frank's foot and was only driven back by several shots from his pistol. Fortunately one of the bullets penetrated an eye. Frank then thought that if he could shoot the other eye out they might reach the ground and kill the bear. So he made a communion in the tree, and brim came at him with a bound. Frank immediately fired several more bullets in his face, and at last succeeded in destroying the sight of the other eye. The bear was now blind, but by no means harmless. He remained by the trees, and the slightest movement of either boy aroused his fury.

Frank's gun lay just under his tree, and John's rifle off near the log. If they could in some way reach the firearms the situation might be changed. The bear's wounds were desperate, but there was still much life left in him, and he seemed determined to get the boys. He started off toward the creek, but quickly turned back to the trees, ever on the alert. Again, as the effects of his wounds began telling on him, he would start away for water. John called to Frank that he would climb down and get one of the guns if he would watch the bear and warn him in time.

Presently the wounded creature moved slowly toward the water, stopping often and suspiciously sniffing the air, as he could not see. When he had reached the creek, Frank called out:

"Now is your time. Slip down quietly and get your gun. He can't reach you before you get back if you're quick about it. He's got to stop now with our bullets. Give him another crack in the head, but be careful."

John slid softly down, but the bear was on the alert for any movement on the part of his prisoners and started rapidly back, but they were satisfied with his outcome. Guided by his instinct, he made for John, who raced after his rifle at the top of his speed. Reaching the ground, he slipped on the roots of the great lumbering beast, he jumped on the opposite side of the log and opened fire as rapidly as possible. He pumped half a dozen bullets into the bear's head, and on came the infuriated animal, and lunged blindly over the log. John jumped backward, but his feet caught in some vines and he fell on his back. The next instant the huge beast would reach him. But there came a loud report of a gun, and then another, and another, and the monster cinnamon bear, that had been monarch of this part of the Blue Mountains, rolled over John in the death agonies. Before the boy could escape, one mighty sweep of the bear's forepaw nearly tore his coat from his back, and badly bruised his face.

Frank had slipped down the tree just in time, an amazing his gun, ran forward and gave him the death wound. He barely saved John from being torn to pieces. The bear they had killed was the largest ever seen in the Blue Mountains.

Another cinnamon bear was seen in the rear of Mount Emily, on the east side of Grand Ronde Valley, years ago, but when it was killed it did not quite measure to the one the boys attacked. Hunters afterwards told John and Frank that their venture had been a foolhardy one, but they were satisfied with its outcome.

After the battle with the bear, the boys pushed on to the meeting place. It was late when they reached the open ground, marked by a clump of gnarled pine trees. Silas and Stub were not there. Frank fired his rifle three times, according to agreement, but only the echo of the report swept up and down the cañon, and among the pine rocks of the lofty cliffs. Night came, and Silas and Stub had not arrived. Sorrowfully John and Frank built a huge bonfire in the open on the side of the cañon.

They replenished it at times during the night and fired their rifles in the hope that there might be an answering report from the two missing boys, but nothing came to relieve their suspense.

Occasionally they could hear the blood-curdling cry of a mountain lion from the timber below them. Once the animal came close by, and the boys were caused to retire into the forest. It was a lonesome night, and the two boys were glad to see the sun creeping slowly over the mountains to the eastward and lighting the pine trees and granite peaks with streaks of golden light.

ALICE M. WELLS.

Why 'Possums Are Greasy.

Unpleasant Ending of a Party Given by Brother Bear.

One day Brother Bear told all the other animals he was going to have a party at his house. He said it was going to be a swell affair. Brother Rabbit was the only one who wanted to go, and so, when the time came, Brother Rabbit dressed up, put on flowers in his buttonhole and started off. Brother Rabbit hadn't gone far when he ran across Brother Fox, sitting by the road in his dirty clothes. Brother Fox said:

"Hello, Brother Rabbit! Where are you going, dressed up like that?"

Brother Rabbit said: "Why, Brother Fox, ain't you going down to Brother Bear's party? I'm going there."

"No, that's too much of a swell affair. Why, Brother Bear is going to have pickles and ice-cream. No, I ain't going."

Brother Rabbit begged and begged, and finally Brother Fox consented to go.

They had not gone far when they came across Brother Terrapin, crawling along in his dirty clothes. Brother Terrapin said:

"Hello, Brother Rabbit! Where are you and Brother Fox going?"

"Why, Brother Terrapin, ain't you going to Brother Bear's party? I and Brother Fox are going there."

Brother Terrapin said: "It's too swell an affair for me. Brother Bear is going to have a stew, and I can't eat stew."

Brother Rabbit begged and begged, and finally Mr. Jim Crow said no, that it was too much of a swell affair; that Brother Bear had a sign out, which read like this:

NO FLYING ROUND.

WALK SLOW.

"And I ain't using any place where I can't fly," said Brother Rabbit.

Brother Rabbit begged and Mr. Jim Crow said "No." Brother Rabbit begged again, and finally Mr. Jim Crow said "Yes."

They had gone a little way when they heard some one say:

"Hello, Cousin Jim Crow! Where you going?"

Mr. Jim Crow said: "Come on, Uncle Turkey Buzzard. We are going to Brother Bear's party. Ain't you going?"

Mr. Turkey Buzzard said: "No, Brother Bear has a sign out that reads like this:

NO DEAD

PEOPLE HERE.

"And if there ain't any dead people there, what am I going to eat? You won't see me there." Mr. Jim Crow begged and finally Mr. Turkey Buzzard said he would go if Mr. Jim Crow would find him a dead animal the next day. Mr. Jim promised he would, and Mr. Turkey Buzzard went then.

Soon they came across Brother Wolf, Brother Lion, Brother Cow and Brother Possum, and all the other animals, and made them go. Soon they came to Brother Bear's gate, and, sure enough, there was the sign:

NO FLYING ROUND.

WALK SLOW.

And Mr. Jim Crow turned round and made for home. Then, when they came to Brother Bear's door, there was the sign:

NO DEAD

PEOPLE HERE.

And Mr. Turkey Buzzard turned around and made for home. Then the animals went in and danced and sang and talked. When they went to supper, Brother Terrapin, who had been sitting high enough for himself, so Brother Rabbit he put Brother Terrapin on a shelf, right above Brother Bear's chair. Two first dishes that came on were pickles and stew. Brother Fox took his hat and made a bee line for home.

The next dish was stew, and as Brother Possum put it before Brother Rabbit, he lost his balance and fell, hitting Brother Bear on the head. Brother Rabbit jumped up and overturned the table, throwing all the grease all over Brother Possum. That is why possums are always greasy.

Brother Possum was so ashamed at being so greasy that he sneaked out the back way and went home and made Mrs. Possum grease his hair every day. Possums are greasy that way every day because they are so ashamed.

The Game of Postman.
"Postman" is a very lively game, quick movement and a scramble for places being the life of it. Boys and girls of every age find it immensely entertaining. It may be played by an unlimited number, the more the merrier.

The only thing to prepare for it is a list of cities and towns equal to the number of players, one of the players is selected as the postman. Having removed as much of the furniture from the room as possible, arrange the chairs around the walls, in a circle, and have every player sit on a chair. There must be no empty chair; this is essential.

The postmaster gives to each player the name of a city or a town, and then blind-folds the postman and places him in the center of the room. The postmaster himself stands where he can overlook the players.

Every thing being ready, the postmaster begins the game by saying, for example: "I have sent a letter from New York to Boston." The moment he has spoken, the players representing New York and Boston, respectively, get up and move quickly to change places. It is the object of the blindfolded postman to catch one of the players, or to catch the postman of one of their chairs. If he succeeds in doing either, the player he has caught, or whose chair he has taken, has to become postman.

The postmaster is not changed unless he becomes tired. If you get a good one, keep him, for much depends on the readiness with which he calls the mails between the cities.

This is the jolliest kind of game, and there is just enough romping in it to go boys and girls a long good.

12,000 Blind People at Tea.
Over 12,000 blind people and their guides assembled for tea at the People's Palace, Mile End road, at the invitation of the National Blind Society, the first week in November.

This society, which has been in existence over 10 years, assists all blind persons, irrespective of creed; it helps the blind in their own homes and grants pensions to deserving otherwise unprovided for.—London Express.