

HOW PLANTS TRAVEL.

When danger threatens, the rabbit wanders away in long jumps, seeking protection in a hollow tree, a log or a hole in the ground. When food becomes scarce squirrels quickly shift to new regions. Coons, bears, skunks and porcupines move from one neighborhood to another. When the thickets disappear and hunters abound, with turkeys and partridges retreat on foot or by wing. When the leaves fall and the cold winds blow wild geese leave the lakes in secluded northern lakes with their families, reared during the summer and go south to spend the winter. Turkeys swim from pond to pond, and crawl from the water to the sand banks where they lay and cover their eggs. When they swim up or down the creek with changing seasons or seek deep or shallow water, as their needs require. Beetles and butterflies, when young, crawl about for food and shelter, and when older use their wings in going longer distances.

When many kinds of wild animals wish to meet for consultation and to make plans for self-protection in northern Michigan they are able to do so at any time of day or night by means of legs, wings or fins, and, when the convention adjourns, they quietly return, each to his favorite spot. These examples only serve to recall to mind what every boy and girl knows and has known ever since he can remember that most animals move about whenever they want to or whenever other animals will let them.

Some small animals, like lice ticks and tiny spiders, walk slowly only for short distances. Suppose food became scarce and they are suddenly seized with the desire to move for a long distance, what are they to do? On such occasions ticks and lice watch quietly the first opportunity, catch on to the feet of birds or flying insects or other animals which may happen to come their way, and, like a boy catching on to a farmer's sleigh, ride till they get far enough, and jump off or let go and explore the surrounding country to see whether it is fit to live in. A spider is dissatisfied for some reason and wants to leave the home spot. She climbs to the top of some object, spins out a fine, long web, which floats in the air, and after awhile it will become so long and light that the wind will bear the thread and the spinner for, no one knows, how long or how far. The study of lice and spiders shows how wingless insects can go long distances without wings of their own.

How is it with plants? A black raspberry bush of three or four common loamst grows fast in the ground and has to stay in one spot for life. They have neither legs, feet nor wings, and yet they all travel. The black raspberry bush takes deep root and spreads out its branches, which are sometimes ten feet or more in length, and the tips curve over to the ground six feet, and finally take root and new colonies are formed, five or twenty in a year by one bush. True, the old ones do not get far, and the new plants only get about six feet in one season, but they have made some progress. This is rather slow locomotion, you say, but let us look a little further, remembering that a seed is a little plant packed ready for transportation.

In summer buds are formed, blossoms appear and these are followed by small green and bitter berries, which hardly anything cares to eat. They grow slowly, become soft and pulpy and good to eat. How is bird or boy or girl to know where they are and when they are fit to eat? The plant has enterprise and has displayed two want advertisements just by painting the berries bright red and then dark purple when they are good to eat. But the plant made expressly to produce berries just to feed birds and children? If that is all, why are seeds formed in the berries in such large numbers? No! They produce berries that contain seeds to grow more bushes. Then why should not the berries always remain bitter or hard, so that nothing would touch them? If we may say so the plant produces sweet and showy berries on purpose to be eaten that the seeds may be carried away. What becomes of the seeds? Each one is inclosed in a hard, tough covering, which protects it from the destruction in the stomachs of most birds and other animals. The seeds are well distributed by the animals, which eat the berries. The brilliant colors of ripe berries say "Hard and child."

"Here we are, eat us, for we are good." The sweet pulp pays the birds for distributing the seeds, else they would not be so distributed. The seeds are well provided for locomotion as ticks, the mites and the spiders, and when ready to go the berries flaunt their colors to attract attention. You see, then, that, although the old parent bush cannot change its place, young bushes grow from the tips of the branches and seedlings spring up at long distances from their old home.

The common locust, like the raspberry, remains for life in one place. Its long limbs are not slender and recumbent to the ground to start new colonies, but its roots spread from twenty to forty feet or more and send up little trees in every direction, and this is about the same as moving slowly about. After a time the tree blossoms and large numbers of thin, flat pods are produced, but even when the seeds are ripe the pods remain of a dull color like the raspberry nearer right in plan and more enterprising? The pods of the locust wait and wait, holding fast for a long time, but nothing comes out of them. They become dry and slowly split apart, each half of the pod usually carrying every other seed.

Some of the pods with the seeds are born off by the wind and fall to the ground sooner or later, depending on the force of the wind. Each half-pod as it comes off, is slightly bent and twisted, and these are want advertisements given to the wind: "Here I am, thin, dry, light and elastic, twisted and bent all ready; give me a lift to bear these precious seeds up the hill into the valley or over the plain."

And the wind is sure to come along a slight breeze to-day tossing the half-pod a few feet, leaving it perhaps to be again and again moved further forward. The writer has seen them transported by this means to the distance of more than a block in extent. But many

of the pods stick tight to the limbs, till winter comes. A breeze tears off a few pods, and they fall on the snow, which has filled up all the crevices in the grass and between the dead leaves and rubbish. Each half-pod freighted with its small seeds is admirably constructed like an airboat, with sail all ways to the breeze. In this way there is often nothing to hinder some of the seeds from going a mile or two in a few minutes, now and then striking some object which jars off a seed or two. The seeds are very hard, and purposely so, that they may be seldom eaten by insects or birds, but once in moist soil be covering slowly swells and deays, allowing the young plant to escape. Thus the lowest seeds are produced with neither legs, wings, pins, nor sails, but they advance by brilliant blue and sweet pulp, but they travel in a way of their own, and literally on the wings of the wind.

The woods, fields, marshes, roadsides ever abound in interesting objects provided with strange devices waiting to be studied by inquisitive girls and boys in and out of school, and this finding out of nature's puzzles is one of the deepest pleasures of life.

First Locomotive Whistles. We are accustomed to regard the whistle as a very important part of the locomotive engine, but within the memory of some of the older engineers the well gave the only warning of the approach of a train. The first whistles were intended as a warning in more ways than one. In the early days of the railroads the trains were much interrupted by cattle, sheep and pigs on the right of way, and in order to frighten them off a small hole was bored in front of the engine boiler and fitted with a tube. When the train came rattling along and the engineer saw a cow on the track he opened this hole and it spouted the steam and hot water with a tremendous roar, and hissing, filling the air with a cloud of mist, it was enough to frighten the most in-repid cow and send her bawling from the track.

Presently some ingenious workman fitted up a reed and drove it into the steam hole and the steam and whistling that it made not only frightened the cows, but terrified every one who lived along the road. But it did its work so well that the whistle was finally removed from the front of the engine and placed on top, where it is used to-day.

A similar story is told of the first teambout whistle used on the great lakes. Early in May, 1841, the steamer Rochester departed from Buffalo, bound for Chicago. The engineer was a mechanical genius named McGee, and he had considerable steam whistle from plans which he had seen in a scientific paper. On the way the lake ice blew it at every point to the astonishment and terror of the inhabitants. Just before the Markinaw he Rochester, after a lively race, passed the steamer Gen. Porter, Capt. C. A. Gager. Engineer McGee celebrated the victory by blowing his whistle desultively and noisily. When both boats reached the wharves the Gager rushed up in a rage, shaking his fist and telling McGee to come down and face him.

"What are you squawking that thing at me for?" he roared.

And if it had not been for mutual reefs, steamboat whistling on the lakes might have been introduced with a lively battle of fistfights.

See-Hunting.

A gentleman who spent some weeks on a sheep ranch in Australia gives a very interesting account of a day spent in see-hunting with one of the sheep herders. This gentleman had been told that this herder had secured a thousand pounds of honey the previous season. When he heard this, he asked the see-hunter if he would go with him one day on a see-hunting expedition. The see-hunter gave his consent. The lay for the expedition was the see-hunter provided himself with some pure white cotton, a bottle with some gum, and a bottle of water. They started for the bees' land on a long time going occurred. When the see-hunter gave a start and went cautiously into a clump of flowers. The gentleman saw a bee perched on a stalk gathering honey. The hunter filled his mouth with water, from the bottle, and when near enough to the bee squirted it on the bee, wetting it thoroughly. Deftly then he applied a bit of cotton to the back of the bee with the gum. As soon as the wings were dry the bee started for home, the hunter and his friend followed for miles. At last it disappeared in a hole in a tree. The store of honey was found. The see-hunter smoked out the bees and got seven pounds of honey. When he was ready to leave, he gave an exclamation of joy, as he looked at a bird, something like a sparrow, but smaller, that hovered near. This, he explained, was a honey bird, and that the bird would guide them to a home of bees. Off they started again, the bird flying before them. After traveling many miles the bird hovered about some trees. The see-hunter watched. At last a bee appeared, and darted in a hole in the tree close to the ground. These bees were smoked out, and another large store of honey secured. The see-hunter left some for the honey-bird as wages for guiding him to this storehouse.

A Wonderful Shawl.

The Empress of Russia possesses so many marvellous articles that it is hard to describe any as being most wonderful. There is no doubt, however, that a shawl presented to her as a wedding gift by the ladies of Orenburg, a town in the south of Russia, ranks high as one of the most curious of her numberless possessions.

The shawl reached the Empress in a wooden chest, with silver locks and hinges, the outside being embellished with designs of spears, turbans, whips, etc., in a ground of blue enamel, this being the color of the Cossack uniform. On the inside of the box is a gracefully worded inscription, begging the Empress to accept the gift from "her faithful and devoted subjects."

The shawl when spread out, is about ten yards square, but is so exquisitely fine that it can be passed through a ring, and when folded up, it makes a parcel of a very few inches square. It was a unique present, and is not only curious, but exceedingly valuable.

OUR FASHION LETTER.

Coats and Jackets For Fall and Mountain Wear.

THE ERA OF STRAIGHT FRONTS.

Smart and Useful Coats of Irish Frieze—Autumn Coiffures For Maid and Matron—Importance of the Flattering Touches of Dress.

The long coat is invaluable for traveling, and for country and bad weather wear it will be found a very useful companion. Covert coating, hopsack and serge are all admirable if endowed with a finish which prevents the material from spotting or cockling with rain. If intended simply for a rain



A TAILOR MADE SUIT. A cloak waterproof serge is excellent and is supplied by all the leading manufacturers of serge.

The fronts all hang more or less in a straight line, but some of the neck backs are drawn to the figure by tabs which collect the central fullness just at the waist.

Coats of Irish frieze lined with bright plaid silk are useful and smart for late fall mountain wear.

The illustration shows a tailor made costume of gray cloth trimmed with gray and white passementerie. The hat is trimmed with shaded ribbon.

HAIRDRESSING FASHIONS.

There is no hard and fast rule so far as coiffure is concerned. Large, loose waves are still the fashion, and a good many exclusive women are wearing their hair simply parted and drawn back, without any wave at all.

Young girls are wearing the hair low, with a big black silk or velvet bow behind. For smart occasions in the evening the hair is generally dressed very high, and innumerable tortoise shell pins are worn. The wreath of leaves and flowers is still to be seen, and jewels are never out of fashion.

For morning wear the short skirt is the proper thing, even in light dresses.



SATIN EVENING DRESS.

White is still popular in all kinds of fabrics and styles, but with the advent of the fall brown will obtain a greater prominence than it enjoyed even last year. The smart blouse and skirt of the future must be in one shade. There is a rage for spotted and check-

ed material made up with platted waists and skirts.

The cut shows a dinner gown of satin trimmed with a Greek design in narrow velvet.

SMART SUEDE COATS.

The smartest things which will be beloved of Paris later on are the coats made of suede in greenish gray and brown tints and dark myrtle green. Naturally the cloth skirt must match exactly.

It is the finishing touches which count on the simple morning gown. French women put into the simplest gowns the most exquisite stitchery. Even the tailor made gowns show a certain amount of fine stitchery.



TAFETTA SILK GOWN.

very smart brown serge frock had one of the new skirts cut just to clear the ground all around, with three deep flounces edged with a red and green narrow piping of embroidery. The waist was arranged with a cape shaped collar of the embroidery and had two narrow box plaits back and front, finished at the waist with a red suede band.

In the picture is shown a silk gown trimmed with tuckings, little tassels and insertion of yellowish lace.

COLLARLESS GOWNS.

A few dressmakers are cutting the demitulle slightly decollete, but the very best models have high, transparent collar bands. Collarless dresses will be worn for restaurant dining, but



BLACK CREPE DE CHINE GOWN.

they are generally accompanied by wide strings to a hat or a tulle chignon or feather stole.

White spotted fabrics are smart. A very charming ring spot on a soft ground, made up over a silk or satin slip and trimmed with the always popular Irish crochet or valenciennes lace, is one of the most popular of evening gowns for a young girl. Many such gowns have beautifully shaped waist bands of black panne, which seem to correspond so admirably with a black picture hat and give a note of distinction to the all white frock.

The cut shows a black crepe de chine gown having a collar of cluny lace and chiffon ruchings. JUDIC CHOLLET.

"OLD DAN."

He Had a Close Call, But Wasn't Quite Licked.

There is an old rafterman on the Susquehanna River whose proud boast it is that he has never been whipped in a fight. This means a good deal, for the sturdy raftermen are all splendid specimens. Fights over the most trivial matters are of daily occurrence. "Old Dan," as he is called, has now grown very feeble and rheumatic, but he is never tired of recounting his exploits as a fighter when he was a young man. The old fellow always stoutly affirms that he has never been licked, but after a good deal of pressing he can sometimes remember that he once came very near being soundly thrashed.

"Yes, sir, the nearest I came to being whipped was over twenty years ago. I was carrying a load of logs up to the mill one powerful hot day in August. The sun was a-shining fit to sizzle your brains. As I was going alongside of a wood, which threw a shadow just half way across the road, I met a man in a buggy coming straight at me.

"Turn out," sez he. "Turn out into the sun yourself," sez I. "Well, after that we came to words, Bimeby we came to blows. "We fit till the sun went down and then I turned out."

"Oh, you did turn out for him then, Dan?" "Yes, when the sun went down the shadow was all over the road. I didn't care then. That was the nearest I ever came to being whipped."

Knew What Courts Were Made For.

A humorous scene was enacted in the Superior Court room at Jackson, Ga., recently, just after sentence had been passed upon a negro charged with burglarizing a store. Col Watkins defended the negro, and was about to open the case with a well-prepared oration of his innocence, when the negro quietly informed the Colonel that he desired to plead guilty.

Mr Watkins then stated to the court words to the effect that the defendant desired to confess his guilt. Judge Beck accordingly read the law in the case and sentenced the negro for ten long years.

After sentence had been passed and quiet reigned supreme, the negro called his eyes round and beckoned Col Watkins to come forward and when the lawyer reached his side the negro gently whispered:

"Say, Mr Watkins, kaint yer 'peal fer a new trial?" The scene was quite ludicrous, and caused much laughter. Atlanta Constitution.

Satisfactory to Him.

"No, Mr North," said Miss Dukane, with decision, "I cannot accept you. To be perfectly frank you are really the last man in the world I would think of marrying."

"That suits me perfectly," replied the suitor. "Haw, sir," murmured the girl with some asperity. "I do not propose from a sense of duty, hoping I would reject you, or had you a wager on the subject?" "Neither, I assure you. You said I am the last man in the world you would think of marrying. Now I see no reason in the world why you should think of marrying anybody else after me."

This cheerful view of the matter so charmed Miss Dukane that she accepted it herself. The two will be married in September. Pittsburgh Chronicle-Telegraph.

Familiar But Hated Sounds.

"Augh waugh!" It was the baby. He had repeated the remark sixty times in the past hour. Mr Newleigh's baby, such as it was, stood on end.

"Glow ahwb waw kwaw flwaugh" added the baby, while people living across the street got up and closed their windows.

Mr Newleigh took a whetstone out of the table drawer and ground his teeth. "To think," he groaned, burping his face in the pillows, "that I should grow up to become the father of a Union depot train-trier!" Rockland (Me.) Tribune.

Not Cheated.

The assassin brandished aloft his gleaming dagger. "Am I to be frustrated?" he cried. The heroine clasped her hands. "No, Fitzgerald Brown Brown," she calmly shrieked, "is your worst. My true love from across the sea has quit the company, and his understudy is slok. Brown Brown is your worst. You'll never get a better thing."

With a fixed laugh she laughed at the tremor in the orchestra, indifferent to her fate. Detroit Tribune.

Styles From the Jungle.

"You look as if you needed a hair cut," said the elephant, nosing about the lion's cage.

"Before you go around making remarks about other people's appearance you'd better trim down your ears," retorted the lion, shaking his mane. "You show your ivories too much when you talk, anyway." Chicago Tribune.

He Stood Higher.

Mrs Bellefield (to her daughter)—Mr. Dukane is over head and heels in love with you, dear. Miss Bellefield—So is Mr. Gaswell, mamma.

Mrs. Bellefield—But you must remember that Mr. Dukane is six feet tall, while Mr. Gaswell is only about five feet seven in height. Pittsburgh Chronicle.

A Slander No Doubt.

Her head had dropped upon his shoulder. "If only," he whispered, "thy cheek could remain there forever." Little thought had he what was to be. Little thought had he until he got home and tried to remove her cheek from his dress-coat with ammonia and alcohol. Detroit Tribune.

True Blue.

Miss Spendlow—And are you sure you are not marrying me for my money? Count Pearlina—Ah, were I but after that alone I should sue you for breach of promise.

Too Thin.

"No, mine friend," said the Barter street merchant as he gathered up the extra fullness in his hand, "there is nothing so madder mat dot coat. It is a fine fit, only you was a liddle thin."

Sick With Remorse.

"They say that Needle is sick." "What is the trouble?" "Remorse. He gave a tramp a counterfeit dollar and the fellow passed it at his store." Harper's Basar.

WITH THE PARAGRAPHERS.

Jugs and race horses should be well handled.

Some dead Spaniards have been canonized.

Circumstances make fewer men than they discover.

It is easier to be wrong than it is to be president.

Occasionally a woman's face isn't as bad as it's painted.

When an orator goes to prison he acquires a poor address.

The fit of a tailor-made suit often depends on the pockets.

It's a wise man that knows how to dive on his wife's relations.

Familiarity with danger is apt to breed contempt for it.

Intervention in love is equivalent to a declaration of war.

The music of an accordion is sweetness long drawn out.

The poeter artist is often the originator of villainous designs.

Macduff was probably a bricklayer, as he was told to lay on.

The greatest objection to summer mornings is they get up too early.

But very few men with distingue airs ever distinguish themselves.

Birds in their little nests agree. It would be poor policy to fall out.

It is better to stand on ceremony than on somebody's corns in a street car.

The person who has no suspicion of his own inferiority is never jealous.

Man is made of dust and with a little too much irrigation his name is mud.

A man may be a complete master of himself and yet have nothing to boast of.

The poetry of motion is portrayed by the picnic girl with a bug down her back.

Electricians supply us with current topics and physicians with news of the weak.

Happy is the woman who has as many changes of gowns as she has of mind.

All ignorant men are superstitious, but all superstitious men are not ignorant.

Diamonds are usually possessed by others when they happen to be trumps.

A girl doesn't necessarily lose her head when she lays it on a young man's shoulder.

Talk is cheap, but the love prattle of a girl is always dear to the enamored swain.

It's all right for a man to speak right out in meeting, providing he knows when to stop.

The angels couldn't be better than men in love declare they will be after they marry.

When some men pin a miniature flag on their coat lapel their patriotism has reached its limit.

Without a conductor the lightning express would thunder along till it struck something.

The one redeeming feature about sea sickness is that it makes you forget all your other troubles.

The balance of political power is in the hands of men who can do nothing but vote and find fault.

It's always necessary to pass around the collection plate in order to get the cents of the meeting.

Some men are workers in the vineyard—and some others get their work in on the finished product.

There are but very few women mind speakers, but when it comes to mind speakers they are very much in evidence.

The greatest trouble with some people is that they insist on conversing about things with which they are not conversant.

When a young man sits ten feet away from a girl and tells her that she is his first and only love she can bank on his veracity.

The man who gives a justice of the peace \$10 for marrying him is apt to wish in after years that the J. P. had given him ten days instead.

TOLD BY FIGURES.

Sixty languages are spoken in the empire governed by the czar of Russia.

The proportion of blind people in the world is 800 to every 1,000,000, or one is 1,250.

Italy produces annually 70,000,000 gallons of olive oil, the market value of which is about \$120,000,000.

Careful measurements prove that the average curvature of the earth is 6.91 inches to the statute mile.

At sea level an object 100 feet high is visible a little over thirteen miles. 105 feet high it is visible nearly thirty miles.

The highest price ever paid for a poem was 6,000 golden crowns, paid to Sannazaro by the citizens of Venice for his eulogy on their city—a poem of six lines only.

A new kind of cloth is being made in Lyons from the down of hens, ducks and geese. Seven hundred and fifty grains of feathers make rather more than a square yard of light, water-proof cloth.