

ADAPT THEMSELVES TO SURROUNDINGS

HOW ANIMALS CHANGE WITH THEIR MODE OF LIFE.

Hoofed Beasts, Such as Sheep and Pigs, Have Lost Power of Tree Climbing Through Disuse.

Every one of the higher animals in some way mechanically adapted to its mode of life and surroundings, a horse or an antelope being from one point of view a living galloping or trotting machine. Putting such examples aside, there are numerous cases of more peculiar adaptations to which attention may be confined.

For example, the climbing creatures. It may be noted that a number of species, such as Old World monkeys and squirrels, present special modifications for a life in the trees, the essential being that they should have the power of rotating the forearm on the upper portion of the limb and that their toes should be mobile and fitted with claws or nails.

There is one group of African rodents, designated scaly tailed squirrels, the members of which seem to have lost the necessity of ascending and for the purpose of tree climbing. They have accordingly developed on the under surface of the tail certain structures which may be compared to the climbing irons used by workmen. These take the form of a few transverse rows of large, triangular, horny scales, with their points directed backward. These scales, when pressed against the bark of a tree, must afford a firm grip.

The Anteaters' Climbing Scales. Another group of animals in which climbing irons have been developed is that of the scaly anteaters or pangolins of India and Asia—creatures which look more like living fir cones than mammals. The scales—much larger than those of the scaly tailed squirrels—cover both surfaces of the body, as well as the head and limbs, and it can scarcely be supposed that they have been developed for climbing. Indeed, only a few species climb; these have found the assistance of the scales on the under surface of the feet as climbing irons.

A different type of climbing, that of the climbing irons, has been noted in the species of tropical birds which spend their time in hanging upside down from the branches of trees. These birds, which may be seen in the tropics, have modified their feet so that they can afford a firm grip of a branch. The thumb of the foot is modified into a hook-like structure which is used for grasping the branch. The claws are also modified so that they can afford a firm grip of a branch. The thumb of the foot is modified into a hook-like structure which is used for grasping the branch. The claws are also modified so that they can afford a firm grip of a branch.

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PRACICAL FARMING



Cultivating Corn Right.

As with everything else, there is a right way and a wrong way to cultivate corn. Those who take the wrong way do not, I am sure, stop to think what is the real purpose of doing this work. Two things are in view when cultivating. First, to stir the soil, and, second, to destroy any weeds that may grow in the rows. Neither of these things can be fully accomplished unless the corn is planted in checks, so that we can cultivate it both ways.

The makers of all up-to-date cultivators very wisely make them adjustable, so that the teeth can be widened or brought together as the nature of the case demands. But a great many men, especially those who do not give the matter the attention they should, rarely move the lever adjusting the width of the teeth. They set the machine in one place, usually much too narrow, and that while they make a few scratches down through the middle of the rows, they do not loosen up the soil near the hills of corn, neither do they remove the weeds and grass that grow close up to the hills and so the work is by no means well done.

Now, the crop we get depends in a great measure upon the way the cultivating is done. A poorly cultivated field will not, it cannot, produce as much corn as one that is given the care of properly. So this is the thing for us to do. Every time we go through the corn, work to get the outside teeth of the cultivator as close up to the rows as can be and not rot up the plants. If we do stir up some of the soil, this will not do any particular damage. The good it will do will offset any injury thus done. And if we go both ways, throwing the cultivator over as described, and especially if we go back into the same row in the same way, we will find but little grass or weeds left and we will have stirred the earth thoroughly near the corn plants.

Sore Necks and Shoulders.

Work hours often become disabled from sore necks or shoulders just at the busiest time of the year. For the most part the trouble is preventable.

Have the collar fit properly. The collar and horse should be taken to the harness-maker for him to say whether the fit is correct; if not correct, he should mend matters as far as possible. Often it will pay best to buy a new, smooth, properly fitting collar, for the old mended or adjusted one rarely has a perfectly smooth bearing surface and it is the rough surface that causes sores. If the collar is too big or too small it will be likely to cause sores.

A new collar needs mending to the shoulders. Some soak the collar with hot water to make it more pliable and leave it in place for twenty-four hours after fitting to the shoulders. Such a plan seldom is necessary if the fitting is correct. The next important point after fitting is to have the harness straps buckled tightly at the top and at the bottom, gradually become stale, or come moldy. Hidden nests, too, are found, and all these eggs go into the basket, eventually to find their way to market. Is it any wonder that the village store it is common to find eggs that are dirty or smeared, shrunken or stale, or even partly or wholly spoiled? The village store-keeper is not at fault. Had those eggs been candled the trouble could have been prevented.

To correct the injustice to the careful poultryman, and to place a premium on the production of good eggs and their subsequent careful handling, a system of buying is necessary which bases payment on quality.

Every shipper of eggs should place on the market nothing but strictly first-class eggs. Specific terms must be adopted to indicate the quality of eggs. The term "fresh" seems to have no special significance with regard to the exact quality or age of an egg. Fresh means a condition of relative newness; that is, not pretreated. Under ordinary conditions, an egg should be held not longer than a week to remain fresh.

Training Cucumbers.

Where space is limited, the gardener may grow cucumbers by training the plants against a building or over a fence. The training should begin early. Where cucumbers are planted near a fence or house, a should be made and the plants trained to this. It may be necessary to tie the plants to the support at first, but the tendrils of the vines will soon hold the vines to the trellis. The climbing cucumbers are best suited for training, because of the numerous tendrils which aid the plant in climbing. One advantage of the growing on trellises is that the cucumbers are evenly green, instead of having a white side.

The historic battle of Waterloo was begun and finished in eight hours.

OUR COMMUNITY IS WELL ORGANIZED

By B. C. MEACHAM.

It was when our new school house was finished and we wished to entertain the Teachers' Convention that we felt the need of organization. The women responded nobly, however, to this call, and we surprised the teachers and ourselves also, by serving a picnic dinner of several courses. We used the little trays that grocery men send out and distributed them to the teachers at their seats.

After this we immediately organized The Home and School Club, composed of the teachers and the mothers of the community. Our first work was to give pay entertainments in order to buy a piano and build sanitary outside closets.

We then began to try to make our school house as a social centre. We worked with the children, for the children and for the community. When time came to open school we called the children to meet us to help clean up the school house and clear the grounds of weeds, believing they would be more interested in weeding the place in order. They weeded well and when they had finished the club gave them a jolly melon-cutting on the grounds.

Later we undertook to clean up the streets, calling on the children again to help. They were notified by having all the trash around their homes gathered up at a certain time. One of the citizens furnished team and hand, the children, with a woman as director, traveled the streets to gather the rubbish and trash, stopping at the children's homes for their collections. There was an amount that astonished us. The combustible stuff was hauled to the school grounds where was kindled a good bonfire. The tin cans and other unburnable material were taken to the dump. When the work was finished all enjoyed a well-earned treat of lemonade and crackers at the school building.

In the spring there was a free distribution of flower seed among the children, with instructions to plant

and raise flowers preparatory to a flower show, which was held in the fall. It was a very pretty affair. The house was decorated with colored leaves, flowers and pumpkin pots. Some of the children had fine pots and others had bouquets of cut flowers. The girls wore garlands on their heads and the boys had buttonhole flowers. There was a program and the children sang about flowers or recited appropriate poems.

At one time we invited those who were not members of our club. The club collected books to start a library, and some very nice volumes were secured.

We sought information from our Provincial Geologist and encouraged and assisted the children to make a collection of the soil and rocks in the vicinity.

The members of the club carried a magazine exchange, having a certain place for deposit. In this way all could read different periodicals when subscribing for only a limited number.

We started a Story Hour one afternoon a week during vacation. One member was appointed or rather volunteered to tell stories and superintend the plays. She usually chose a helper as it was found that more than one was necessary to manage the crowd when it was large. Every story-teller tried to invent some new ideas and each one wrote out the principal items and read them at the next club meeting. In this way everybody kept informed about the proceedings of the story hour.

After the story part, the children were allowed to play games while the director remained. This was a great benefit to mothers who did not like to have the little folks out of sight or playing on the streets.

At time for electing new officers, the retiring president entertained the members at her home. The new president was ready to assume duties with a good program mapped out for the next meeting.

wherever the Gospel has been proclaimed since that day. All who hear have not responded to that call, but those who have responded have proved the promise abundantly true. They have become not only the called, but also the elect, of God.

Save Yourself. God saves in Christ, and yet we have our part to perform in this work of grace. It is ours to hear, to give attention, and to respond to the divine call; ours to seek, in penitent obedience and trust, admission to the Church and its holy fellowship.

They Continued Steadfastly. The life of the infant Church was marked by "the apostles' doctrine," or teaching, and "fellowship," which involved frequent meetings for conversation, for "breaking of bread" together in memory of the Lord, and for "praying" and "singing" to one another, and for "praising" the Lord, and for "praying" and "singing" to one another, and for "praising" the Lord, and for "praying" and "singing" to one another.

Their communion, however, was voluntary, not forced, and it seems not to have continued very long, and perhaps not to have spread beyond Jerusalem. As a mode of life it had many desirable and excellent features, but it proved to be impracticable. The whole picture presented here of the primitive Church is one of simplicity, good fellowship, kindness and happiness.



INTERNATIONAL LESSON JULY 6.

The Church: Its Life and Work—Acts 2: 37-47; 1 Thess. 5: 11-15. Golden Text, Eph. 5: 25.

Acts 2: 37-47. What shall we do? This was the question of many of those who heard Peter's sermon at Pentecost. They were deeply impressed, what he had told them, and they were convicted of sin. "What shall we do?" they cried, and we can imagine them pressing forward with eagerness to the place where the group of disciples stood about Peter. Peter's reply was, "Repent, and be baptized." These were the two conditions of entrance into the company of those who believed in Jesus Christ. Repentance meant turning from the old way of life. It meant a change of mind and a change of attitude toward Christ. It meant sorrow for past sin and for past error and misdeeds, and a full purpose of heart to serve God in following the new way of faith in Christ. And baptism meant an open and formal confession of Christ, and at the same time was an appropriate and well-understood symbol of the cleansing of the heart from evil.

The Church began with Jesus Christ himself and the company of earnest and devoted disciples, both men and women, who gathered about Him. The twelve chosen men, who had formed an inner circle about Jesus, were destined to be its leaders. They have now been waiting for some time in Jerusalem, in obedience to their Master's command, in fellowship, earnest conversation and prayer, and their waiting has been crowned by a great experience. It is nothing less than the assurance that the Spirit of their Lord is with them, a real and living Presence and Power. With enthusiasm and with joy and with praise to God they bear testimony to their faith in Jesus, and many who listen are convinced and drawn into fellowship with them. The Church, in the power of the Spirit, has begun to expand and grow.

To those who repent and confess Christ in baptism there comes forgiveness, "the remission of sins," and the promise of the highest of all gifts, the gift of the Holy Spirit.

For the Promise. The ancient covenant promise of God was to those who received it and to their children (Gen. 17: 4-8). In the prophets it became the promise of a great King and Saviour of David's line, and of the outpouring of God's Spirit upon the nations (see Rom. 9: 4; Acts 3: 25; Isa. 54: 13; 55: 3-5). So the door of faith and the blessings of Christ's kingdom of righteousness were to be for the coming generations, and also for "all that are afar off," that His Church might extend throughout the whole world.

As Many as the Lord our God Shall Call. God's call sounded in the ears of those who heard Peter's sermon at Pentecost, and it has sounded



"How shall I provide succulent feed for my dairy cows?" is a question often asked by the man without a silo, but seldom answered satisfactorily. Not so many years ago we were asking the same question, for we had no silo. We tried many kinds of crops. Turnips brought best results. A good way of growing a lot of turnips cheaply, we found, is to plant them in the corn-field.

The first cold nights do not hurt the turnips. The frost sometimes bites the leaves a little but does not wither them. When ready, the turnips are easily pulled up by hand. We never trim them before hauling, for they are easier to handle with the leaves on. After hauling the roots home, we trim them and feed the leaves to the cows in the yard. The leaves furnish good succulent feed for many weeks.

After being trimmed the turnips are put in a pile on the ground near the barn and covered with straw and winter, when we haul them into the barn, pile them up in a pyramid and cover them with dry, clean straw.

Every morning and evening we chop up a few, mix the cuttings with bran, and feed to the milk cows. Their milk flow increases almost at once, and continues high all winter. In fact, we believe that turnips and bran make almost as good succulent feed as ensilage.

Fresh air is the best cure for colds.



Stars-With-Wings.

In the moons of long ago the little Indian children had to find their way alone from their mothers' arms to the Land of Sleep. Sometimes they grew frightened at the noises of the night and lost their way in the darkness. They missed the daylight sounds—singing birds, whispering leaves and running water; and they stumbled over roots and stones.

The Great Spirit was sad because his smallest children could not find their way to the Land of Sleep. So he went to the Moon Mother and asked her for some tiny stars. When she granted his request he took the stars down the Sky Road that leads to Mother Earth, and at the end of the journey he gave wings to each little star. After that, when the little Indian children went from their mothers' arms to the Land of Sleep, the stars-with-wings flew ahead of them to show them the way. They made a happy company on the road to the Land of Sleep. The little Stars-with-Wings led the way, and the drowsy children followed, while high up in the sky the Moon Mother kept loving watch.

One night when the company had reached the Land of Sleep one little child was missing. All the Stars-with-Wings went back to find him. The sun had gone to sleep behind the high mountains and the music of the day had stopped; only the West Wind was softly singing her evening song.

After a long search they found the child. He was lying asleep, snug and warm, under a tall tree. Lying close by on the ground was a little Stars-with-Wings. It had fallen and broken its wing, but it had not stopped for a moment giving out its light for fear the sleeping child would be frightened in the dark.

The Stars-with-Wings waked the child and guided him safely to the Land of Sleep. Then they hurried back and lifted their little hurt sister star and carried her tenderly home. It was many nights before the wing was strong enough for her to go to work again. After that the little Indian children loved the Stars-with-Wings more than ever. They gave them a family name—Will-o'-the-Wisp.

Sometimes at twilight you see a soft, faint light bobbing here and there down in the meadows and across the marshes. "Will-o'-the-Wisp," people say, pointing to it; but you know that some drowsy little child is being guided to the Land of Sleep by a Star-with-Wings.

Support for Tomato Plants.

Supports are necessary for producing the finest tomatoes. Unless the fruits are held well off the ground, they will be liable to rot; they will be slow in ripening, will color unevenly, and will lack in size, smoothness and shapeliness.

One of the best supports devised is the stake-and-hoop support or frame. This is made as follows:

Two ordinary wooden barrel-hoops, twenty inches in diameter and three stakes are necessary for each support. The stakes should preferably be square, to facilitate nailing. They should be about three feet long, two inches wide, two inches thick, and pointed at the lower end. Make the top hoop encircle the three stakes; place the second hoop about fifteen inches below, and set it inside the three stakes. This arrangement

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spreads the feet of the support, making it steady. If hoops of different sizes are used, put the larger ones below.

Your Field Acreage.

It is comparatively easy to figure the acreages of rectangular fields when the same have produced corn; provided of course, that the rows are the standard distance of 3 feet 6 inches apart. Count the hills each way and multiply these results together. Next divide by 3,556, the approximate number of the square acres enclosed between four adjacent hills of corn. The quotient will be the area of the field in acres.

Use a flannel rag moistened with vinegar to shine isinglass.

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How To Figure Lumber. All lumbermen and carpenters talk in terms of board feet. A board foot is a piece of timber 12 x 12 inches and one inch thick. This means that a block of timber twelve inches square contains twelve board feet. To find the number of board feet in a piece of timber, follow this simple rule: Multiply the end dimensions together, divide by twelve and then multiply by the length of the piece in feet.

In buying lumber to cover floors, ceilings, walls, etc., it must be remembered, however, that 100 feet of lumber will not cover 100 feet of surface. It is necessary to allow for lapping and matching. The amount to allow differs with the various kinds of stock, as follows: To four-inch flooring add thirty-three per cent; to six-inch flooring add twenty per cent; to diagonal sheathing add twenty per cent; to ceiling add thirty-three per cent; to lapping add thirty-three per cent.

Handkerchiefs were not always square. At one time they were shaped to the user's fancy. It chanced that this irregularity displeased Queen Marie Antoinette, who suggested that a uniform shape would be an indication of good taste. The result was a decree by Louis XVI, issued in the early days of 1785, enacting that all pocket handkerchiefs should have right-angled edges henceforward.

"Grandma-in-the-Service"

"Hello, Aunt Fan!" cried Paul cheerfully from the doorway. "And how's the ankle this morning? Thought I'd stop in to say howdy. I am going to what my revered grandmother calls 'divine service.' Aren't you proud of me?"

"Very glad to see you, Paul," said Aunt Fan, extending a cordial hand from the easy-chair where she sat with her foot propped on a pillow. "Glad, too, to hear about the divine service. What branch are you planning to enter?"

"Branch of the service?" inquired Paul in a puzzled voice. "I guess you didn't hear what I said. I was referring to my beloved little grandmother's habit of calling church 'divine service.'"

"Yes, I heard," said Aunt Fan, with a wise smile. "I was just inquiring what branch of that service you were going to enter. You were so particular about being in the artillery when you enlisted in the army that I thought you might be equally so about this."

"Oh, but divine service isn't like those things. It's just going to church, you know. That's all."

"Oh, is that all? And going to church means—"

"Why, listening to the sermon—and to the prayers—and the anthems—and singing hymns."

"I did hope, Paul, that being in the service of Canada would teach you something about the meaning of the word. What good do you think an army or navy would be that sat by and let the officers do that all the work? From what I have gathered from you boys, you don't get the chance. But wouldn't it be a queer army if you did? Would you approve of it?"

"But, Aunt Fan, the army, the artillery—"

"Branches of the 'service,' aren't they? And it was a 'service' flag, wasn't it, that we put up so proudly for you in the window? And up at church, too? You expected to 'serve,' didn't you, when you enlisted? What did you expect to do when you enlisted in the church? Attend services merely?"

"No, Paul, your beloved and revered little grandmother, as you called her so lightly, has a right to speak of going to divine service. She's been an active soldier in that cause for more years than I can remember, and she has served with all her heart and soul, and in just as many branches as she could—in the same service that you enlisted in, too, you remember. But you had better just call it 'going to church,' hadn't you, and not expect anybody to be very proud of you until you have learned to put into that service some of the lessons that you learned in the service of your country? But, oh, Paul, when you boys do that—really enlist and serve—the church of God will move 'like a mighty army' to the most wonderful victory the world has ever known!"

"Well, say, Aunt Fan," said Paul, fumbling awkwardly with his hat, "you certainly do know how to say things straight from the shoulder. Looks as if I were a sort of cross between a slacker and a deserter, doesn't it? And asking to be put on the back because I turn out for drill once a month or so. But maybe, thanks to you, I'll get 'over the top' yet. Just now I suppose I'd better be running on to church. Not to hear a sermon—oh, no, I don't need any more of a sermon than I've had right here! But just to tell the captain down there to take my maple leaf off their service flag and put one on for grandma. And she is 'my beloved and revered little grandma,' too, Aunt Fan. Honest! However 'rightly' I may speak."