Planting Your Own Trees

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fall in late May or early June; the seeds of the sugar maple (*A. saccharum*) ripen just before the leaves fall, and those of the box elder or ash-leaved maple (*A. negundo*) persist on the trees throughout a large part of the winter.

Seeds of the red and silver maples and of the elms which ripen in the spring should be planted immediately. They germinate quickly and under favorable conditions the maple seedlings should be well over a foot high by fall. Seeds of the other maples as well as those of the ashes, birches, catalpas, sumachs, sycamores, tulip tree and ailanthus which mature in the fall can often be gathered in winter. Seeds from these trees can be kept until spring in a cool room that is not too dry. On the other hand if the seeds are too moist they will mold. They will do very well if placed in airtight containers (e. g. fruit jars) and stored in a cold cellar. Where the seeds are in balls or massed together as in the sycamores and sumachs they should be separated before storing.

Most coniferous seeds should be gathered in the fall and stored in the manner just described. It should be remembered that cones are not seeds, and usually when the open cones fall to the ground the little winged seeds which were borne within each cone scale are gone. The cones should be gathered from the trees just before opening, dried until they open and the seeds rattled out. It will be easier to plant the seeds in the spring if the thin wings are rubbed off before storing.

Seeds of the cherries, mulberries and other fleshy fruited species may be treated as follows: First mash the fruit thoroughly. Then place in a pail and hold under a water tap. As the pail fills the fleshy portions will float to the top and the seeds will sink to the bottom. Pour off the liquid. Dry the seeds and keep them in a cool place.

Tulip tree, sycamore and basswood seeds have a very low viability and one can not expect more than a half dozen seeds to germinate out of every hundred planted.

After being placed in the ground some seeds remain dormant for a long time. Basswood seeds do not germinate for about eighteen months and black locust seeds require nearly as long a time unless treated in the following manner: Mix the seeds with an equal quantity of hot water and stir constantly until cool. After this treatment the seeds should germinate in a few weeks.

Seed gathering and tree growing need not be limited to those children who live in rural or suburban districts. The ailanthus, whose seeds hang in bunches on the bare limbs all winter, manages to exist even in our biggest cities and under the most unfavorable conditions. On many a winter hike other seeds can be gathered. These can be planted in gardens or even window boxes in town as well as in the seed bed in the country or at camp.

Those who wish to obtain more information concerning the growing of trees can do so by writing the New York State Conservation Commission. Albany, N. Y., the New York State College of Forestry, Syracuse, N. Y., the New York State College of Agriculture, Ithaca, N. Y., or similar sources in other states. Excellent detailed information is contained in the book *Seeding and Planting,* by Toumey, published by John Wiley & Sons.

The writer is grateful to John W. Stephens, Professor of Silviculture at the New York State College of Forestry, for critical reading of, and helpful suggestions concerning this paper.

FAY WELCH,
Camp Directors Association.

Science News-Letter, July 23, 1927

A nursery deck where small children may play is provided on some new steamships.

The Polynesians are the tallest race in the world, averaging five feet eight inches in height.

Jewels of the Darkness

There are few things as fascinating as watching the marvelous changes which take place in the life of a moth or butterfly—to watch the progress from egg to caterpillar, then to chrysalis or cocoon, and finally to see the triumphant emerging of a beautiful winged creature with only a few fluttering hours of sunshine or moonlight to live!

We may hunt for moths, not to kill them, but to keep them until they lay eggs, so that we may watch this life cycle from its very beginning.

Miss Wickwire, Camp Fire Guardian and director of Camp Nyoda at Cortland, New York, has been most successful in interesting her girls in this phase of nature lore.

Moth hunting is a mysterious business. Six are enough for our expedition. Three should have flashlights and three poison jars. These are wide-mouthed fruit jars with tightly fitted tops, in the bottom of which the druggist has put lumps of cyanide of potassium, covering them with plaster of Paris. We put a layer of cotton over the plaster so that the moth will not shake around too much.

We must also have our sugar mixture and a whitewash brush. To make this sugar mixture we have put about two quarts of vinegar and ten pounds of brown sugar together with all the rotten apples and bananas we could find. We should also take with us six dozen five-pound paper bags bought at the grocery store.

We must find a group of trees, and with the whitewash brush daub a spot on each with the sugar mixture, letting it get well into the crevices. Daubing about thirty trees or fence posts close together will make the concentrated odor which will attract the moths.

We can rest now until it gets dark. Then slip up cautiously with the lights and turn them full on the "sugared" spot. Don't let them waver or every moth will fly away.

Those with jars must be ready with the tops loose and step quickly to the tree. Hold the jars low, raise the top and scoop down. Moths when disturbed with few exceptions dart downwards. Therefore they dart into the jars. Nevertheless be quick with the cover or they will dart out. Be sure all are stunned and quiet before going to the next tree.

We find many moths of gray, brownish gray, and other shades

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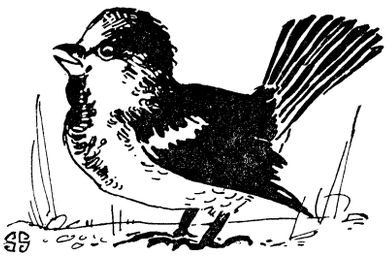
BIOLOGY

NATURE RAMBLINGS

By FRANK THONE



"A Rat in Feathers"

This generation, that groans under the burden of a multitude of pests, finds it hard to realize that some of the worst of them were deliberately brought in from foreign lands by our forefathers. Yet apparently reliable tradition has it that the dandelion was thus imported, and the gipsy moth and its ill cousin the browntail. The Norway rat came uninvited, but the English sparrow, the rat's equivalent in feathers, arrived as a guest. It is even recorded that several determined efforts had to be made before the bird became established in this country. Nowadays we wonder at the misguided persistence of our ancestors no less than at their bad taste in birds.

There simply isn't one redeeming feature about the English sparrow. He is dirty and frowsy in his personal appearance. His nest is an untidy mess, always where it is most bothersome, and rebuilt with the repetitious tenacity of a rat as often as you tear it out. He is a quarrelsome bully toward his betters, and a murderer of their young whenever he gets a chance. He is forever and copiously using his voice, which hasn't a single musical note in it. He is faithless to his spouse, who is equally faithless to him. He is a disgrace to his kinsfolk, for the rest of the sparrow people are "quality" among birds, and have a position of their own among the country gentlefolk. If, as old moralists argued, there is some use for all created things, the only utility of the English sparrow so far discovered is to perfect the patience of the saints and the vocabulary of the sinners.

Science News-Letter, July 23, 1927

Cockatoos sometimes live to be 80 years old.

There are more than 6,000 kinds of capterpillars in America north of Mexico.

Jewels of the Darkness

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among which tan predominates—one especially lovely kind on the hind wings of which are bands of glowing rose and black.

We must take our catch from the poison jar about every ten minutes and put them in the bags.

We will feed them with dried apples soaked in honey, and water, a teaspoonful of strained honey to a quart of water. Apples may be soaked all day, then be dropped into the bags. The moths only sip the moisture from the apples, so they may be again dried and used many times.

The moths must be classified by carefully comparing their markings with the pictures of moths in Elliott and Soules' "Caterpillars and Their Moths," or some other reliable moth book. They should then be put in separate bags, only one kind of moth to a bag, with the name written on it.

Each day we must keep a watch for eggs. These are sometimes so tiny they are hard to see and are of different shapes, colors and exquisite patterns when seen through a microscope. A full description should be kept of these as there are many common moths whose eggs have never been described. The date when egg are first seen in the bag should be put down under the moth's name. When the moth dies, the eggs have all been laid, not before.

Eggs should then be cut out from the bag with enough paper around them to insure handling without touching them. They should be kept in test tubes with the name, date of first laying and date of death of moth written on gummed labels.

Watch the eggs for any change in shape, colors or markings and put down the dates when changes take place and what they are.

Watch Those Caterpillars!

At last the eggs hatch. When the caterpillars come crawling out of their eggs, they'll want more room to romp around in than the test tubes will allow, so put them into jelly glasses or jars. Brush out the jars every day with a paint brush having a fairly long handle. Usually, a very little sprinkling may be done for young caterpillars are thirsty "critters." Great care must be taken as the tiny creepers are easily drowned.

Some eat their shells after hatching and this habit should be noted in the record. Usually it is twenty-

(*Just turn the page*)

NEUROLOGY

Perfect Brain in Future?

Evidence that the human brain of which man is so proud is probably just a forerunner of the perfect brain of the future is presented by Dr. Frederick Tilney, professor of neurology at Columbia and one of the foremost authorities on the brain in this country. So far as instincts are concerned, present day man has not progressed beyond the prehistoric Neanderthal man who lived 100,000 years ago and looked like a gorilla, he states.

The first comparative study of the evolution of man's brain and its relationship to the brains of the higher apes has just been completed by Dr. Tilney. His results reported to the *Archives of Neurology and Psychiatry* indicate that the human brain has made steady growth up to the present time, and that it is now in an intermediate stage.

Famous specimens of prehistoric fossils, some several million years old, were placed at the disposal of Dr. Tilney by the American Museum of Natural History.

"When the brains of all the prehistoric men we know are placed side by side there is not a question of doubt about this progress in development, which is sufficient to convince the most skeptical," he states. "There is a definite increase in the width of the brain, expanding those areas which have to do with sensation and the part of the brain which has to do with the higher faculties of reason and judgment."

Where man has stood still, or perhaps even fallen behind, is in learning to control his own nature, he concludes.

Of the oldest man-like creature known to science, Dr. Tilney says: "In size and appearance its brain resembles that of a three-year-old child."

From careful comparison of famous relics of early men and apes he finds evidence of the close relationship between them in the evolutionary scale.

As one of his conclusions, he states: "That there was a definite prehuman stock, capable of producing both anthropoid and man, cannot be disputed."

Science News-Letter, July 23, 1927

A new bird refuge has been established in Alaska.

Alexander the Great was a left-handed swordsman.

Jewels of the Darkness

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four hours after hatching before baby caterpillars begin to eat, but food should be supplied at once nevertheless. Where food plant is known this is easy. When it is not, several kinds of leaves may be cut into strips and put in the test tube with the eggs and caterpillars.

Most caterpillars molt four times between hatching and changing into the chrysalis or pupa state or the spinning of a cocoon. Each skin must be described and dates kept together with any noticed change of habits. The excrement of caterpillars is usually in the form of black pellets, but before the great change to a pupa takes place, the intestine is emptied. This excrement is more or less liquid and sometimes brownish or greenish. This is the first sign of pupation. At this time a quiet caterpillar sometimes becomes restless, and all cease to feed.

Now is the time to give earth to the burrowing kind and a place to hang from to those that want to hang, and leaves to those that use them in making their cocoons. Many die at this stage and none sould be disturbed or touched. They sometimes shrivel to half their size and look dead, but at this time you should be very sure before destroying a caterpillar. Watch and wait. Usually the skin is shed within two or three days and either all is well, or all is over.

Now the only thing left is to wait for the glorious winged creature of darkness or daylight to break through.

HARRIET A. WICKWIRE.

Science News-Letter, July 23, 1927

Nature Coordination

Realizing the need for a national program that would coordinate the nature activities of national groups working with young people, the American Museum of Natural History invited these volunteer organizations to form a council to be known as the Coordinating Council on Nature Activities for the purpose of teaching the growing generation, through nature activities, the value of all wild life and natural resources and their conservation.

The various organizations represented are as follows:

American Museum of Natural History, American Natural Study Society, Boy Scouts of America, Camp Directors Association, Camp Fire Girls, Inc., Girl Scouts, Inc., Pioneer Youth of America, Woodcraft League of America.

Science News-Letter, July 23, 1927

MEMORANDUM

This blank space serves a dual purpose. It allows you to clip out the article on the reverse of this page without destroying any other article. It can also be used for notes and the recording of your own observations.