JUST A BUMBLE-BEE

BY JENNIE A. REEHER.

The front yard of the big farmhouse was bright with early spring flowers, tulips, narcissus, and iris. Dandelions bespangled the grass like golden stars. Charlie, the ten-year-old son of the home, and I, a visitor, were enjoying the morning looking for new blossoms that might have opened during the night.

"There's a bumble-bee; let me kill him!" shouted the little boy.

"Stop!" I spoke quickly, as he grabbed a shingle and made for the bee. "Don't hurt it. Come here to the porch and I will tell you a story about this handsome bee."

"Huh! there's nothing pretty about an old bumble-bee. They sting. We boys like to rob their nests and get the honey," he said scornfully.

"And robbers you are, when you do such a thing, robbing Mother Nature of something she needs in the world's work. Listen to me," I continued. "This big bee we saw is not a 'he.' It is a Queen Mother bee. If you should kill her, you would destroy the little home she has founded. I think her black and yellow suit is handsome. I noticed you liked the black and yellow sweater your mother gave you. Anyhow, why do you want to kill the bee?" I smiled at him as I questioned.

"Don't know," answered Charley, "guess it's because it might sting me."

"She never would, unless you hurt her or invaded her home," I replied. "Now for the story. First, do you know what cocoons and larvae are?"

"Yes, indeed, we learned all about them in Nature Study at school," said the little boy.

"Fine, then you will understand everything I tell you. You know how a hen broods her eggs and little chickens to keep them warm? Yes, well Mother Queen Bumble-bee does that very thing. She hovers her eggs and babies."

"How do you know that she does, Aunt Annie?" said Charlie, his face aglow with interest.

"Because wise men have watched her do it and have written in books all they observed," I returned. "This bee you wanted to kill, came from the nest last August, a fine large young queen only a few days old. Her coat was fresh and glossy, her life free from any care as she flitted around all day sucking nectar from the flowers, and flying in the warm air where one day she met her mate. She was storing up energy for the future."

"Where did she go at night," asked the child, "did she go back to the nest?"

"No, she never went back after leaving it. At night she crept in a crevice on the south side of a building, or wall, or some such warm place. But later on the weather began to grow cold. Can you guess what she did? Bees cannot endure cold you know.

"She might have holed up for the winter, like the chipmunks do,"—he answered.

"Good guess, Charlie, that is exactly what she did. She went searching around, as soon as the September chill came in the air, until she found a small hole extending far beneath the roots of a tree. Down at the furthest end of it she snugly slept all through the long winter, while the snow was piled a foot or more deep over the ground outside. One warm April day the Queen mother awoke, "No more easy times for me,' she might have said, if she could have talked like a boy. She crawled out of the ground and filled herself with honey from the early spring flowers, then started to seek for a nest."

"I've seen 'em, I've seen 'em!" shouted Charlie, jumping up and down, "big bumblebees, alone, hunting around, going into, and coming out of holes. Sometimes they get into the house onto the window and we kill them."

"Oh Charlie," I said, "don't ever do that again. Now listen! The queen finally finds a place that suits her; often it is an abandoned nest of the wood mouse, in a log, or bunch of grass, or under the roots of a tree. She clears off the floor, then arranges the bits of moss and grass in a circle around it. Then she goes away to gather pollen, which is, as you know, the dust of flowers. All kinds of bees gather it to feed their young. We call it bee bread. Did you ever see bee bread?"

"Yes. Sometimes it is in honeycomb from a hive of bees father has smoked out and put in another hive. It doesn't taste good."

"It tastes good to the baby bees. Queen Mother gathers a lump of pollen, mixes it with honey, then fastens it to the floor of her nest. Upon top of this lump she builds a circular wall of wax, then in this cell lays her first batch of eggs, about a dozen, and finishes by sealing a cover of wax over it. The whole thing is small, about the size of a pea. As soon as it is completed the mother, like a tiny hen, sits on those eggs night and day, only leaving when the sun is high to get honey for her own food. But you know that at this time of year cold storms, lasting for several days, are liable to come. If the bumble-bee left her eggs at such a time they would chill and she would perish. Therefore she builds a honey pot and keeps it filled and thus has food for stormy days."

"How big is the honey pot, Aunt Annie, and what is it made of?" said Charlie, his eyes sparkling.

"It holds nearly a thimbleful of honey; it is made of wax, and it is round like a little bowl. It is placed near the entrance to the nest and close enough to the mother bee that she can eat from it without leaving her eggs. Thus, too, she is facing her door to guard against intruders. In about four days the eggs hatch and the larvae begin to eat the bee bread that forms the foundation of their home. Their mother enlarges the cell as they grow, thus always keeping them covered with wax. At first, she opens the cell and puts food among them, then closes it again, but in a few days they are large enough to stand up, wedged closely side by side, and then she feeds each baby bee separately. She fills each little mouth with honey and pollen mixed, from her crop, something similar to the way a canary bird feeds its young. Soon they are full grown and spin themselves thin, tough blankets for cocoons in which they go to sleep. Queen Mother pulls the wax from off them and then, she has rows of pale yellow sleeping babies. They must be kept warm, and so she broods them again night and day."

"Does she still keep the honey pot?" inquired Charlie.

"Oh, yes, there are yet many cold days. But here is something queer. She could not cover all the cocoons if they were flat, on the same level, therefore the two outer rows are higher than the centre ones. The larvae composing these rows have been fed a little better than the others, thus making them grow taller. Queen Bee knows her business, you see. In the groove thus made she sits—the groove is always made so her head faces the entrance—flattening and stretching her abdomen until the central cocoons are covered, and then putting her legs over the raised outside ones, she clasps them close to her sides. Thus all are kept warm."

"Why, she must love those babies of hers," exploded Charlie. "I never realized before that a bumble-bee knew anything. I like to hear about her. Go on, Aunt Annie."

"There isn't much more to tell. In a few days the young bees come out of the cells and then the queen has plenty of helpers. This brood is much smaller-sized insects than those hatched later. The queen keeps on laying eggs which the workers care for, while they also gather much nectar and pollen. The big honey pot is broken up and the wax used for other cells. In a few weeks the colony has grown until there are hundreds of busy bumble-bees in it. In the late summer a dozen or more larvae are fed in such a way that they grow into large, fine queens and are sent from the nest as was our queen mother last year. The weather will soon be cold, so Queen Mother lays no more eggs. One day she leaves the nest and wanders among some late flowers, enjoying their nectar. The sky is blue, the air warm, but the bee is old and rusty looking. She goes to sleep among the flowers, the cool night comes on, but she never wakens; her work is done, her busy little life ended."

"I won't ever kill another bumble-bee," said Charlie, "but tell me, auntie, what good are they anyhow?"

"They are most important to the farmers. All bees fertilize the flowers, that is, help them so they can bear seed; but the bumble-bee is the only one which has a tongue long enough to get the honey from red clover, and thus fertilize it. Not a head would bear seed unless a bumble-bee had first visited it, and therefore there would be no clover. Most farmers know this but few know the story of the life of the bumble-bee."

"There comes papa, and I'm going to tell him all about 'em. Wait, daddy!" and full of enthusiasm he left me, while I sauntered toward the house.

Egg-Laying Contests.

During the season of 1923-24 twelve egg-laying contests were conducted by the Poultry Division of the Central Experimental Farm. A Canadian contest was held at Ottawa, and the other eleven were provincial. These contests, which have been carried on since 1919, are intended to encourage and improve the breeding of poultry along lines of egg production, to provide reliable information for breeders and a medium of qualification for the registration of poultry. According to the 1924 report of the Dominion Poultry Husbandman the contests have brought about a remarkable improvement in the breeding of poultry and have done much to stabalize the industry in Canada. The increase in production between the first and fifth years of the contests is 57 eggs per bird. The report, which is distributed by the Publications Branch, Dept. of Agriculture, Ottawa, gives a detailed account of the 1923-24 contests in which 3,610 hens took part and laid an average of 169.6 eggs per hen. One bird in the Nova Scotia section laid 313 eggs in 52 weeks. Out of 1,088 birds laying 200 eggs and over, 753 qualified for registration.

Marketing problems will be much more easily solved when we have convinced our sales agencies that we are putting up an honest graded pack, when they understand that they can dispose of our fruits to an advantage.

One part of borax to two of honey or glycerine is an excellent remedy for a sore throat.

Registered Pedigree Poultry.

Notable progress has been made in poultry raising in Canada in recent years, to which the Laying Contests held in every province of the Dominion have materially contributed. A greatly increased average throughout all the Contests has been reached in a few years, which is direct evidence of a remarkable improvement in the breeding work behind hundreds of entries, reprsenting thousands of matings.

With the advent of registration for poultry, the standard was raised from 150 to 200 two-ounce eggs as a minimum of qualification, and the bird must also conform closely to certain standard characters laid down for the breed.

The standard for the male is still more severe. He must be bred from a dam and grand-dam that have each laid in a contest at least 200 two-ounce eggs and be free from standard disqualifications. To breed such a male is an achievement worthy of an official record and a number of such males will be procurable this year, with authentic pedigree and tatooed with the breeders registered mark and carrying all the identification marks guaranteeing their breeding.

The number will be limited this year, but the supply will increase as the number of daughters of registered dams that qualify in the contest increases.

In breeding up to the excellent standard demanded in registered males there is certain to be surplus stock of lesser lineage not qualified for registration. Many of these are of good breeding, but not tested to the same extent as registered stock. These birds are available in large numbers from breeders of registered stock.

A Demonstration Rose Garden.

The demonstration rose garden established last year upon a plan laid down by the Canadian Horticulaural Council at the town of Markham, fifteen miles from Toronto, has advanced sufficiently to enable rose growers to study many of the leading varieties of roses. A half acre in which one hundred and fifty varieties were planted last year, is now blooming in profusion, and an additional half acre has been opened up this spring. The soil of the garden is particularly suitable for the purpose and the planting has been done with a view to showing off the plants to the best possible advantage. The garden occupies an open sunny spot with a slight southern slope and a broad boulevard of shrubbery as a protection from north winds. Practically all classes of roses are to be found in this garden, contributed by nurserymen in Holland, England, Ireland, the United States, and Canada. The garden is open to the public, and being close to the public highway, it is expected that a great many rose lovers will visit the ground this year.

Effective Methods of Controlling Weeds

BY E. S. HOPKINS.

The most effective method of controlling weeds is thorough and frequent cultivation of the land. Usually this can be given most economically by adopting the proper cultural methods in connection with the regular rotation used on one's farm. Occasionally, where some noxious weeds become unusually troublesome it may be nceessary to summer-fallow the land but, as this method involves the loss of the revenue from one crop, it is desirable to use other methods if at all possible.

Where a rotation of three or four year's duration is practiced, consisting of one year in corn or other intertilled crop, one year in grain, and one or two years in hay, it is necessary to prepare the sod land thoroughly in preparation for the intertilled crop, and also to cultivate the intertilled crop itself in a most thorough manner. This is the most convenient time to control the weeds and the opportunity should not be overlooked. In the four-year rotation, the timothy sod may be plowed, in many districts, by August 1, while in the case of the three-year rotation, where two cuttings of clover are harvested, the plowing will not be possible until about September 1. Where couch grass is present or where there are any other weeds having underground root-stalls, it is very important to get the land plowed early and to cultivate it throughout the remainder of the fall. After the land has been plowed it should be harrowed in order to hasten the rotting of the sod and if couch grass or other similar weeds are present, it should be disced in about a week's time and the discing continued at about one week's interval until the sod has rotted sufficiently to enable the use of the cultivator. When this is possible, the cultivator should be substituted for the disc harrow in order to bring to the surface of the ground the underground root-stalks. Some objection may be taken to the use of the disc harrow owing to its cutting the roots of the weeds but it appears to be necessary to use this implement as early as possible after plowing and before the sod has rotted enough to permit the use of the cultivator, in order to check the top growth of the weeds. In fact, the basic principle in killing weeds which have underground root-stalks is to prevent their sending up top or above-ground growth. If this is continued long enough the roots will die. The process is facilitated by any method of cultivation which will tear out the roots and leave them on the surface of the ground where they will be killed by the sun. It is imperative to give the land very frequent discing and cultivation, especially immediately after plowing in order to prevent all green growth. The whole work will be wasted if green growth is allowed at any time because the roots will then be revived again and their life prolonged.

In the fall this land should be plowed again and left rough over winter. If manure is available at this time of the year, it could be plowed under at this time. If it is not available, it may be applied in the winter or in the spring and then disced in. The land should be cultivated in the spring several times before the time of seeding the intertilled crop.

It will be understood, of course, that this method is suggested for land troubled with couch grass or similar weeds having underground root-stalks. If the land is free from these weeds this work will not be necessary.

If mustard or similar weeds are prevalent it is advisable to merely disc or cultivate the corn ground or where other intertilled crops have been grown, rather than plow. The reason for this is that the surface layer of soil has already been thoroughly cultivated and the majority of the weed seeds contained in it germinated and killed. It is a mistake, therefore, to plow up a new layer of soil on such land which will contain an abundance of viable weed seeds.

Another effective means of checking weeds is to hand pick isolated patches. This work can often be done when the weeds are first seen, but if it cannot be done then, it may be done later when other work is not pressing. It may seem like small business to pick by hand a few weeds, but such a work is a very profitable investment, and the returns if not apparent in that particular year, will be realized in later years when such patches would otherwise have infested larger areas and seriously reduced the yields of crops. In any event, the longer the delay in eradicating the weeds, the greater amount of work there will be eventually. It is simply the operation of the same principle as that which is familiarly known by the expression, "a stitch in time."

It is important to use at all times clean seed grain, clover and grass seed. It is simply a waste of effort to work the land to eradicate weeds while at the same time polluting it with dirty seed. The supply of manure should be rotted on farms where weeds are prevalent in order to prevent this means of spreading weed seeds over the farm, but where weeds are not present it is a mistake to rot the manure owing to the losses of manurial constituents incident to the rotting process.

ICED DRINKS FOR SUMMER DESSERTS

BY JANE HEMMINGWAY.

It may seem at first glance a daring idea, but upon reflection you will find it an attractive and sound one—that of serving an iced drink for the summer dessert. In the summertime a thirst quencher is far more acceptable at the end of the meal than any additional nourishment.

The old stand-bys are always welcome—lemonade, orangeade, ginger ale, grape juice, iced tea, coffee and chocolate, and currant or raspberry shrub and a wafer or a cooky or a piece of plain un-iced cake make a satisfying enough dessert for anyone. But there are many variations of these drinks that may be served when one wishes for a dessert a bit more elaborate.

Sherbet ale is delicious and refreshing. Place a large spoonful of orange or lemon ice in each glass and fill it up with ginger ale. Serve with rolled wafers. The very nicest ice to serve is one made with equal parts of orange and lemon juice with the beaten white of one egg added when the mixture is half frozen.

Peach Delight. Take a quart of sliced ripe peaches and rub them through the colander. Sweeten to taste, flavor with a few drops of almond extract and add a quart of rich milk. Fill glasses three-quarters full of this mixture, top with whipped cream and sprinkle with sliced blanched almonds. Serve very cold.

Liquid Gold. Make a very thin custard, using only the yolks of the eggs and no cornstarch or other thickening. Flavor it with rose or any other flavoring you wish. Dilute with cream if it is too thick. Add finely chopped dates and walnuts, just a sprinkling of them, and top with whipped cream dusted with macaroon crumbs. Serve with brandy snaps. These little snaps are so called because they are used often as an accompaniment to that spirit when it is served overseas.

The recipe was given me by an English friend. To make them, heat half a cupful of molasses to the boiling point and add a third of a cupful of butter. Remove from the fire, and when the butter is melted add gradually, beating all the time, a cupful of flour mixed and sifted with two-thirds of a cupful of sugar and three-quarters of a tablespoonful of ginger. Drop single portions from the tip of a spoon onto an inverted baking pan, two inches apart, and bake in a slow oven. Remove from the pan with a long-bladed knife and roll over the handle of a wooden spoon.

Little wafers and cookies may be made on a cool day or early in the morning and put away in air-tight tins to serve with the iced drinks that are needed on the very hot days.

Loganberry Punch. Rub a banana through the colander. Add it and the juice of one lemon to each quart of loganberry juice. Serve with cheese crackers.

White Grape Juice Float. Seed and halve white grapes. Cut two or three bananas into tiny dice and add fruit to prepared white grape juice. Serve with lemon wakers.

Iced Cocoa. For an iced cocoa drink that is different, mix together a cupful of corn syrup, a cupful of warm water and half a cupful of cocoa. When dissolved boil to a syrup and chill. Then add two tablespoonfuls of strong coffee. For every glass to be served use three tablespoonfuls of the syrup and three of shaved ice. Fill up with rich milk and shake well.

Iced Coffee de Luxe. Place a large spoonful of coffee ice cream in a glass. Fill with ice cold coffee and top with whipped cream. Angel cake is a delicious accompaniment for either iced coffee or chocolate.

Tea Punch. One cupful of sugar and one cupful of hot tea infusion. When this is quite cold add one cupful of orange juice, three-quarters of a cupful of lemon juice, one pint of ginger ale, one pint of water, one tablespoonful of chopped preserved ginger and a large piece of ice. This is a most refreshing drink.

Mint Sangaree. Make a fruit lemonade of lemon, orange and pineapple juice. Color a light green with a harmless vegetable coloring paste and and mint flavoring to taste. Serve with a sprig of fresh mint in each glass.

Orange Rickey. Fill each glass one-third full of cracked ice. Add orange juice until the glass is half full, then fill to the top with ginger ale. Serve with little nut cakes.

Mint Chocolate. Add mint flavoring to the iced chocolate. Top with whipped cream. Sprinkle with a few tiny little green mint candies.

Fruit Limeade. Make your limeade of fresh limes. Add sliced strawberries and grated pineapple.

Serve with fruit cookies.

I make a very delicious fruit cooky using an old aunt's recipe and they are very popular with my patrons. The recipe calls for a heaping cupful of butter, one and a half cupfuls of sugar, two eggs beaten separately, three tablespoonfuls of sour milk, one small teaspoonful of soda, one pound of raisins and as little flour as possible to make the batter stiff enough to roll out. Bake in a moderate oven.

Have You a Foot Scraper?

If the men folks had to sweep the house just one week there would be more foot scrapers at the doors of the farm homes. A foot scraper costs practically nothing, and yet it will save a great deal of dirt from being taken into the house.

Several things may be used to make a good foot-scraper. One may use an old plowshare or any piece of metal, or they may be purchased cheaply. However, the blade of an old shovel, upturned and set in the edge of the concrete step will make a dandy foot-scraper. It should lean slightly outward so that falling dirt will clear the step. A box may be set under the scraper to catch the dirt and when it is full it may be conveniently emptied.

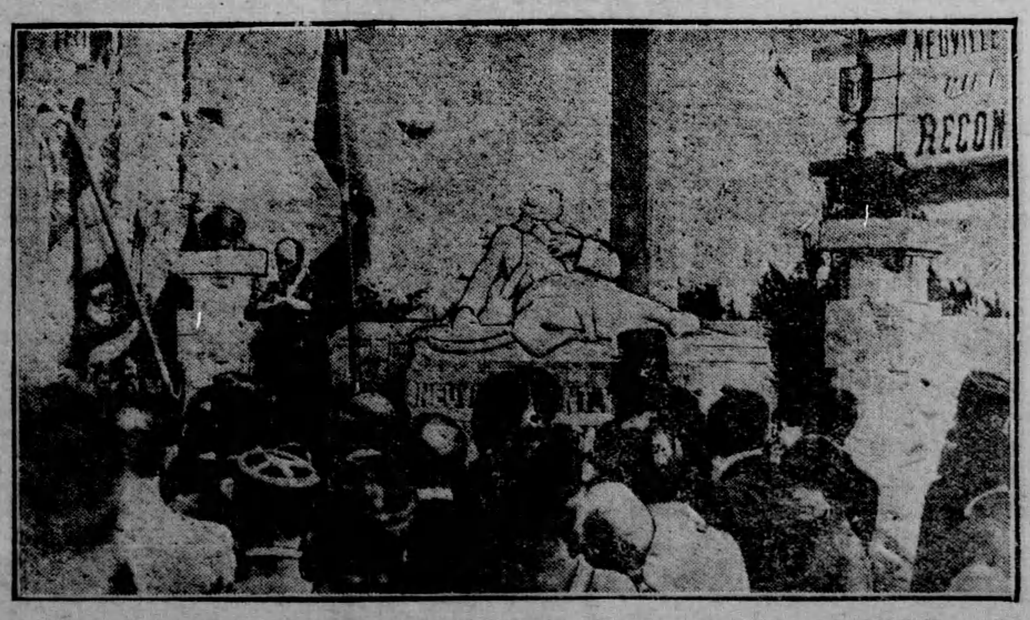
A foot-scraper not only prevents a great deal of work for the women-folks, but it also saves shoe leather by more cleanly removing manure and other leather-eating substances from the soles.—H. I. H.

A Summer Drink.

In trying to combine a number of necessary food values in one summer drink for my three-year-old daughter I evolved the following nourishing, refreshing drink for adults as well as children:

Juice 1 orange, juice 1 lemon, ½ cup sugar, 2 eggs, yolks and whites beaten separately, 1 quart milk.

Beat all ingredients together. The white of the egg will rise to the top of the pitcher. Cracked ice is added for adults.—Mrs. P. W.



The unveiling of the Arras monument, erected to the memory of Canadian soldiers who fell in France during the world war. Canadian Commissioner General Roy is shown speaking.

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