

You see this difference in size fits them to visit little or big flowers. Insects have wings to take them quickly wherever they choose to go. Even the ant, which has cast off its wings, can crawl fast on its six nimble legs.

Then, too, many insects have a long pipe, or tongue, for eating. With this long tube the insect can poke into all the slim cups, and horns, and folds, of the flowers. Is it not easy to see that when the insect flies into a flower to feed, it may be covered with the pollen from the stamens? Did you ever watch a bee feeding in a wild rose? You could see his velvet coat all covered with the golden flower dust.

Why does the insect go to the flower? He does not know that he is needed to carry pollen about. He never thinks of seed-making. He goes into the flower to get food. He eats pollen sometimes, but mostly honey. In business, you know, all the partners wish to make some profit for themselves. The insect partner of the flower has honey for his gains. The flower lays up a drop honey for him. In most flowers there is a little honey. Did you ever suck the sweet drop out of a clover, or a honey-suckle? This honey gathers in the flower about the time that the pollen is ripe in the boxes. Just at the time that the flower needs the visit of the insects, the honey is set ready for them.

Into the flower goes the insect for honey. As it moves about, eating, its legs, its body, even its wings, get dusty with pollen. When it has eaten the honey of one flower, off it goes to another. And it carries with it the pollen grains.

As it creeps into the next flower, the pollen rubs off the insect upon the pistil. The pistil is usually right in the insect's way to the honey. The top of the pistil is sticky, and it holds the pollen grains fast. So here and there goes the insect, taking the pollen from one flower to another.

But stop a minute. The pollen from a rose will not make the seed germs of a lily grow. The tulip can do nothing with pollen from a honeysuckle. The pollen of a buttercup is not wanted by any flower but a buttercup. So of all. The pollen to do the germ any good must come from a flower of its own kind. What is to be done in this case? How will the insect get the pollen to the right flower? Will it not waste the clover pollen on a daisy? Now here comes in a very strange habit of the insect. Insects fly "from flower to flower," but they go from flowers of one kind to other flowers of the *same kind*. Watch a bee. It goes from clover to clover, not from clover to daisy. Notice a butterfly. It flits here and there. But you will see it settle on a pink, and then on another pink, and on another, and so on. If it begins with golden rod, it keeps on with golden rod.

God has fixed this habit in insects. They feed for a long time on the same kind of flowers. They do this, even if they have to fly far to seek them. If I have in my garden only one petunia, the butterfly which feeds in that will fly off over the fence to some other garden to find another petunia. He will not stop to get honey from my sweet peas. Some plants have drops of honey all along up the stem to coax ants or other creeping insects up into the flower. But other plants have a sticky juice along the stem, to keep crawling insects away. In certain plants the bases of the leaf-stems form little cups, for holding water. In this water creeping insects fall and drown.

Why is this? It is because insects that would not properly carry the pollen to another flower, would waste it. So the plant has traps, or sticky bars, to keep out the kind of insects that would waste the pollen, or would eat up the honey without carrying off the pollen.

I have not had time to tell you of the many shapes of

flowers. You must notice that for yourselves. Some are like cups, some like saucers, or plates, or bottles, or bags, or vases. These different kinds of flowers need different kinds of insects to get their pollen. Some need bees with thick bodies. Some need butterflies with long, slim tubes. Some need wasps with long, slender bodies and legs. Some need little creeping ants, or tiny gnats. Each kind of flower has what will coax the right kind of insects, and keep away the wrong ones. What has the plant besides honey to coax the insect for a visit? The flower has its lovely colour, not for us, but for insects. The sweet perfume is also for insects.

Flowers that need the visits of moths, or other insects that fly by night, are white or pale yellow. These colours show best at night. Flowers that need the visits of day-flying insects, are mostly red, blue, orange, purple, scarlet. There are some plants, as the grass, which have no sweet perfume and no gay petals. These flowers want no insect partners. Their partner is the summer wind! The wind blows the pollen of one plant to another. That fashion suits these plants very well.

Now what about the bird partners? Where do they come in?

If the ripe seed fell just at the foot of the parent plant, and grew there, you can see that plants would be too much crowded. They would spread very little. Seeds must be carried from place to place. Some light seeds, as those of the thistle, have a plume. The maple seeds have wings. By these the wind blows them along. But most seeds are too heavy to be wind-driven. They must be carried. For this work the plant takes its partner, the bird.

To please the eye of the bird, and attract it to the seed, the plant has gay-coloured seeds. Also it has often gay-coloured seed cases. These colours catch the eye of the bird. Down he flies to swallow the seed, case, and all. Birds like cherries, plums, and strawberries. Did you ever watch a bird picking blackberries? The thorns do not bother him. He swallows the berries fast—pulp and seed. This case does not melt up in the bird's crop or gizzard, as the soft food does. So when it falls to the ground the germ is safe, and can sprout and grow.

Birds carry seeds in this way from land to land, as well as from field to field. They fly over the sea and carry seeds to lonely islands, which, but for the birds, might be barren. So by means of its insect partners, the plant's seed germs grow, and perfect seeds. By means of the bird partners, the seeds are carried from place to place. Thus many plants grow, and men are clothed, and warmed, and fed.

---

At our special request, one of our first scientists has undertaken the supervision of this charming Department. A Question Box has been opened, and the Editor has much pleasure in asking the co-operation of parents through this means. Address letters—"Natural History Question Box," YOUNG CANADIAN, Box 1396 Montreal.

---

Tenderfoot (in new Kansas town)—"Where is the Post-office?"

Resident—"Over there."

"Where?"

"D'ye see that man sawing wood? He's the post-master."

"Yes, but I don't see the Post-office."

"Of course you don't. It's in his hat."