

Each one will require not less than five hundred. Buy them gummed. The paper to mount a plant on should be fairly stiff, white, or light cream manilla, which is cheaper—12 x 18 inches.

Lay the pressed plant on it to best show it off, and fasten the stem in several places by little strips of gummed paper or court plaster. At the lower right hand corner put the label. With a nice border on the paper its appearance is much improved. Your specimen should now look like this



SPECIMEN MOUNTED, WITH LABEL IN THE CORNER.

#### PROTECTION.

Now, to protect your plant and preserve its beauty, it will be necessary to enclose it in a lighter double sheet, 19 or 20 x 26 inches, of a different shade or colour. A delicate contrasting colour adds neatness and good artistic effect.

Some boys and girls use gum to stick their specimen to the paper. If you do so, you will not be satisfied with it very long.

#### CLASSIFICATION.

All plants that are nearly alike in the number or kind of stamens or pistils, or other parts, are grouped together in classes called "Genera," and these are grouped into "Orders," and these in turn into "Divisions." Each single plant is called a "Species," so that every plant or *Species* belongs to some *Genus* of some *Order* of a *Division*, and has its distinct place among "its sisters, and its cousins, and its aunts," just like the old Admiral in the "Pinafore."

Now, Botanists number every plant of their collection with the same number that the plant has in some great collection, which they recognize as the authority for settling disputes about the names of plants. You know in Ottawa we have a magnificent collection of our Canadian plants, the result of the untiring labours of gentlemen who will think it a great pleasure to give you answers to all your questions about plants, and will take lots of trouble to help and encourage you.

Every plant is named and numbered in this wonderful Canadian collection, and is kept up by our Government for the use of every boy and girl, or anybody who

wishes to learn about some of the wonderful resources that old Dame Nature has given to Canada for her sons and daughters.

Some day, perhaps, we will give you an account of a visit to this Repository of our Canadian wonders in the Geological Department. You will be very proud, indeed, of your Canada, when you hear what wonderful stores of priceless gifts we have, from good old Dame Nature, stored up there, and how much like our plucky, persevering, national animal—the Beaver—is the band of Canadians, once boys like ourselves, who search this whole broad land of ours every year, winter and summer, to find for us all the wonderful treasures we possess.

Well, there they know the name and have a specimen of every known plant that grows in Canada, and they are numbered in a list called "Macoun's List of Canadian Flora," and this gentleman's arrangement of our plants is the one which is best for us to follow.

#### HOW A PLANT GROWS.

Before the spring comes it is best that we have a little talk about how all these lovely flowers, that give us such delight, manage to get along and be so useful to us and to the animals, and the birds, and the insects, and the beasts of the field, for there is not a single blade of grass even, that has not its work to do for that Old Lady who is always thoughtfully working for us night and day.

Let us take a little seed and look at its structure.

It is enclosed in a hard little case like an egg-shell to keep the contents protected. In it there is a little Germ or Embryo, the future plant, and a supply of provisions large enough to last until it grows big enough to gather food for itself. This is the gift of that bountiful old Dame to the little ones of every living thing; so a seed has, first, a little germ, that is to be, perhaps, a lovely fragrant flower, a tree of delicious fruit, or a wholesome, nutritious vegetable or grass; second, a "supply of provisions" neatly wrapt around, or sometimes inside of it; lastly, its "protector," the case or shell.

This little germ lies coiled up asleep for a long time, in fact, does not waken up until its case is softened by moisture, and a little water and warmth gets to it. You all know how a boy will start out of his sleep and jump, if you sprinkle water on his face. Well the little germ is just like the boy. The water swells the dry provisions and alters it so that the germ can take some of it and grow larger.

As this food is drawn by the germ into itself it straightens out, and at the point where the sack of food is joined to it, part of the current (if one may so call so slight a movement of the watered food) goes one way to the upper part of the germ, and part goes to the lower. Then these parts straighten out and grow away from one another, for one has to go *up* to the air to breathe, and becomes the stem and leaves, and the other goes *down* in the ground to suck up more food, and becomes the root and rootlets.

The protector, or shell, and the provision bag or bags, being now of no use, fall away; or the latter, if carried up by the vigorous little Germ, spread out and become green, and partly do the duty of a leaf.

The most of us boys and girls and older people too, don't think roots are of very much account. But that is a very great mistake, for sometimes the roots are the largest part of the plant, and there is as much cunning, I think even more, shown by the underground parts of a plant than by those above.