

PLANTS—LIKE OURSELVES, THEY EAT, DRINK AND BREATHE

PLANTS are living things. That is the first idea we must clearly form about them. They are living in just the same sense that you and I are. They were born from a seed, the joint product of two previous individuals, their father and mother. Plants likewise live by eating; they have mouths and stomachs, which devour, digest, and assimilate the food supplied to them. These mouths and stomachs exist in the shape of leaves, whose business it is to catch floating particles of carbonic acid in the air around, to suck such particles in by means of countless lips, and to extract from them the carbon which is the principal food and raw material of plant life. Plants also drink, but, unlike ourselves, they have quite different mouths to eat with and to drink with. They take in their more solid constituent, carbon, with their leaves from the air; but they take in their liquid constituent, water, with their roots and rootlets from the soil beneath them. "More solid," I say, because the greater part of the wood and harder tissues of plants is made up of carbon, in combination with other less important materials; though, when the plants eat this carbon, it is not in the solid form, but in the shape of a gas—carbonic acid. For the present, it will be enough to remember that plants are living things, which eat and drink exactly as we ourselves do.

Plants also marry and rear families. They have two distinct sexes, male and female—sometimes separated on different plants, but more often united on the same stem, or even combined in the same flower. For flowers are the reproductive parts of plants; they are there for the purpose of producing the seeds, from which new plants spring, and by means of which each kind is perpetuated. The male portions of plants of the higher types are known as *stamens*; they shed a yellow powder which we call *pollen*, and this powder has a fertilising influence on the young seeds or *ovules*. The female portion of plants in the higher types is known as the *pistil*; it contains tiny undeveloped knobs or ovules, which can only swell out and grow into fruitful seeds provided they

have been fertilised by pollen from the stamens of their own or some other flower. The ovules thus answer very closely to the eggs of animals. After they have been fertilised, the pistil begins to mature into what we call a fruit, which is sometimes a sweet and juicy berry, as in the grape or the currant, but more often a dry capsule, as in the poppy or the violet.

HOW PLANTS BEGAN TO BE.

No plant life, means no animal life.

Which came first—the plant or the animal? That question is almost as absurd as if one were to ask, which came first—the beast of prey or the animals it preys upon? Clearly the earliest animals could not possibly have been lions and tigers; for lions and tigers could not exist till after there were deer and antelopes for them to hunt and devour. Now the general connection between animals and plants is somewhat the same in this respect as the general connection between beasts of prey and the creatures they feed upon. For all animals feed, directly or indirectly, upon plants and their products. Even carnivorous animals eat sheep and rabbits, let us say; but then, the sheep and the rabbits eat grass and clover. In the last resort, plants are self-supporting; animals feed upon what the plants have laid by for their own uses. Every animal gets all its material (except water) directly or indirectly from plants. In one word, *plants are the only things that know how to manufacture living material.* —Excerpted from "*The Story of the Plants*," by Grant Allen.

FOREST AND BIRD SOCIETY BADGES.

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