

ment and should not be judged on the same basis as their fellow men who have been reared under the care and nurture of parents of a high ethical and moral standard.

We judge men by their deeds and general behaviour; and according to these we characterise them as moral and immoral without considering whether they are impelled by conscience or disease. In the same manner, let us judge plants and see if we can find characteristics which will suggest a difference in moral standards such as we find in human society.

"Consider the Lilies."

For the purpose of securing a moral standard by which the morals of other plants may be judged, let us follow the Christian injunction and "Consider the lilies of the field how they grow."

As an individual, the Lily is a representative of the highest type in plant society. Its honesty, thrift, diligence and general behaviour may be regarded as exemplary; virtuous to a high degree and possessing none of the vices of other plants.

The Lily is by no means the only representative of this class in plant society, thousands of other genera have attained the same degree of perfection; on the other hand hundreds of thousands have remained in their primitive, savage or semi-civilized state for ages. Some of these semi-civilized forms, instead of advancing, have degenerated, others have become extinct through their failure to keep up-to-date, and adapt themselves according to the changing conditions. Each plant belonging to this type, should be regarded not as an individual, but as a society, a community of millions of individuals, each cell of the plant performing some useful function. The whole representing a highly civilized, democratic nation, governed and controlled by natural laws.

Let us briefly consider the duties of the various members of one of these highly organized types of plant society. Here we find specialization of function carried to a remarkably high standard, one class of the community—ROOT—is responsible for the supply of necessary minerals and chemicals from the soil, corresponding to the raw materials we find necessary for food and building supplies—the average plant employs several millions of workers in this work. Some are engaged in boring and opening up new sources of raw material, others are working these sources and passing the supplies on to an elaborate transportation system conducted by a section of this subterranean community who have specialized in transportation work. The transportation system never consists of less than two double tracks corresponding to four lines of railway—two for the transportation of raw material to the surface of the ground, the others to convey food and building supplies to the underground workers. The importance of this system is emphasized by the fact that a large number of the older workers are retained to protect it, and may be regarded as section men. These workers in their early days were the pioneers who helped to tap the resources of their district, but have now become too old to continue this strenuous work.

Electric Energy Employed Before Man.

When the raw material reaches the surface of the ground it is passed over to another transportation system contained in the stem but connected with the root system, just as we occasionally find electric railways connected with steam locomotive railways. All along this transportation system we have branch lines running off to the factories, or leaves, and it is interesting to know that these vegetable factories employed electrical energy long before man appeared on the earth. The operation of the leaf factory is extremely interesting, very complicated, and of the utmost importance, it is here that the world's food supply is manufactured.

If it were possible to magnify a leaf so that the workers were the size of human beings, or if we were reduced in size, so that we could make a tour of the interior of the factory,

we would find that we were inside of the greatest evaporating plant we had ever seen. We would see the gigantic overhead transportation system and hear the rush of raw material arriving, and manufactured goods departing from the leaf. Situated above the transportation system we would see thousands of enormous retorts in which the food and other requisites are manufactured by electrical energy derived from sunlight, focussed through a battery of lenses which operate in such a way that the power can be regulated according to the amount of raw material to be manufactured.

To describe the methods employed in securing the co-operation and co-ordination of workers in such a factory would itself take all the space available, so we shall hasten to deal with the finished products.

Like a Factory at Full Blast.

As a rule, when the various foods and building materials have been manufactured, they are not removed from the factory immediately; the workers seem to devote their whole attention to operating the factory at full blast while the sun shines, each day's manufactured goods being stored until evening when the whole factory is cleared out in preparation for next day's work. A certain amount of material is retained to feed the workers and effect repairs to the factory, the rest is shipped as rapidly as possible to workers in other regions. All along the transportation system there are what corresponds to railway sidings to receive supplies for the workers in each locality.

Any surplus, after supplying the daily needs of the community, is stored. For this purpose, a large number of individuals are trained or specialized to take care of the stores of reserve material—a kind of gigantic banking establishment. This enables the community to tide over dull periods; in other words, provision has been made for "A rainy day."

"Colonization by the 'Aristocracy'."

In most cases the prime function of this reserve is to finance a colossal scheme of colonization. This is conducted by the most highly specialized members, the aristocracy of plant society. Their dress differs from that of their colleagues, being more attractive and often highly colored or decorated. They seem to have nothing in common with the hard working individuals hitherto described. In fact they contribute little to the welfare of the community by which they are sustained through levies and taxes. In some plants these aristocrats tax the workers out of existence, but in plants like the Lily which we are considering, only an income tax or tax on profits is leviable; the levy being in proportion to the reserve, not taking into account the amount in circulation.

So much for the financing of the scheme, let us see how colonization is effected. It is the aim of this important aristocratic set of individuals to secure groups of young workers, have them trained in national ideals and specialized to perform the various duties in starting a new colony. Each group when sent out, is supplied with sufficient capital in the form of food and building material to establish the colony, but not enough to allow any worker to remain idle. All must work, otherwise the whole colony fails; this occasionally happens when it has settled in a region where the natural resources are insufficient to supply the raw materials.

The Lily as a Representative Type.

It is also the aim of these aristocrats to have the colonies established at some distance from the parent, so that they will not enter into competition to the detriment of the community which gave them a start. Thus the Lily is a fairly representative type of plant to supply a moral standard by which other plants may be judged. Idleness and vice are conspicuous by their absence.

Just imagine the folly of the workers in the root region complaining of having to work in the cold wet soil, while