

main problems that confront the student of plant ecology and also the practical value of the study over and above its mere scientific interest. He then proceeded to demonstrate the fact that the minute structure of the internal parts of plants may reveal an adaptation to their environment no less marked than does their external form or habit of growth. The ability of plants to meet the exigencies of a new environment by a modification of their internal structure was clearly shown as in the case of *Ranunculus aquatilis* and *Proserpinaca palustris* (Mermaid Weed) which were grown in air, although habitually they are aquatic. The difference in internal structure of leaves grown in bright sunlight and in shade was also demonstrated.

The question as to whether or not living plants absorb moisture otherwise than by their roots gave rise to some discussion on account of a divergence of views held by the different members of the Club. The discussion will probably be resumed at some future date when more experimental evidence will be presented. The value of dew to growing plants and the effect on transpiration of relative humidity of atmosphere were also discussed at some length. The view presented by the leader that excepting in the case of a few epiphytic plants which have specialized organs for the absorption of water, dew is only indirectly beneficial to plants i.e. in so far as it depresses transpiration, was challenged and rather discredited.

It was also pointed out that the main causes of internal modification of plant tissues were variations in the intensity of light and heat and also in available water supply. Of these three important ecological factors the last mentioned was considered most important, although a few of the members held the view that variations in heat are of even greater importance in modifying plant structures. The main characteristics of three great classes of plants were pointed out and discussed, viz.: Mesophytes, or the normal plants of a locality not given to extremes or excesses; Hydrophytes, or those plants that are surrounded by excess of moisture and have to provide against "drowning" by the development of an abundance of aeration tissue; Xerophytes, which endure great privation from lack of moisture and excess of heat, and which therefore must adapt themselves to such conditions by developing an abundance of cells for storing up water, by throwing out protective coverings and by lessening transpiration through sunken and protected stomata.

Several miscellaneous slides were also exhibited illustrating Halophytes (plants belonging to saline or alkali lands), Isophytes (plants whose leaves are the same on both sides), Carnivorous and parasitic plants.

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