

### DIRECTIONS FOR THE PLANT LIFE CYCLE CHART

The Plant Life Cycle Chart is designed to give a comprehensive and accurate comparison of the life cycle of representative members of the plant kingdom from the Thallophyta thru to the Spermatophy. The central vertical line separates the gametophyte from the sporophyte generation. Immediately to the right of the upper half of this vertical line and just below the title is a division showing a series of more or less diagrammatical representation of zygotes of these plants starting with that of *Spirogyra* in the inner most cycle and continuing to *Gentiana* in the outside circle. Next below this on the right is a similar series of the developing Sporophytes of these plants. In the horizontal division below this are represented the mature sporophytes. Below this is a division showing the reproductive organs of these organisms. The sporophyte generation is completed in the division to the right of the vertical line at the bottom of the chart. Here the spore mother cells are illustrated.

Immediately to the left of the vertical line at the bottom of the chart are a series of drawings intended to represent reduction division. With these the gametophyte generation commences. To the left in the same division are pictured the spores of the various plants. Just above this division on the left is a section in which the developing gametophytes are illustrated. The horizontal division above this and to the left of the vertical line shows the forms of the mature gametophytes. The division above illustrates the sex organs of the plants, while the last section of the gametophyte generation, which is found to the left of the vertical line at the top of the chart, includes the gametes.

Wherever there is occasion to separate the sexes, the female appears first in such sections as one follows through a cycle in a clock-wise direction.

The design of the chart is intended to illustrate the regression of the gametophyte and the progression of the sporophyte as one ascends through the plant kingdom. This is shown by a comparison of the forms of the mature gametophyte with those of the mature sporophyte.

A study of the forms in any division reveals the increasing complexity and specialization of related structures from the algae through to the angiosperms.