

## 1. Non-disjunction in the Generative Nucleus of the pollen of T-B-10a

The behavior of the chromosomes in translocations involving a B and an A type chromosome has been extensively studied genetically by Dr. H. L. Roman. He attempted to locate a region on the B chromosome responsible for the abnormal behavior that produces hyperploid and deficient gametes during the division of the generative nucleus of the pollen grain. A similar study using cytological material was made of the gametes transmitted through the pollen by plants carrying a translocation between a B type chromosome and chromosome 10 of the normal set. Of the 72 gametes examined that had a complement of normal A chromosomes plus a proximal euchromatic B segment to which was attached a distal segment of chromosome 10 ( $B^{10}$ ), only five showed non-disjunction of the B chromosome at the division of the generative nucleus. These five exceptions were all in pollen grains which had received extra heterochromatin either in the form of an extra B chromosome or on an added piece on the abnormal form of chromosome 10, it therefore appears that the heterochromatic terminal segment, rather than the euchromatic proximal segment of the B chromosome is associated with the non-disjunction of the  $B^{10}$  chromosome in the generative nucleus of the pollen grain.