	% Gl	% Lg	% A
K 10/K 10, K 3/K 3	50%	----	50%
K 10/K 10, K 3/k 3	50	63.3	67.9
K 10/k 10, K 3/K 3	50	----	50
K 10/k 10, K 3/k 3	50 51.7	70.2 72.5	64.2 63.6
K 10/k 10, k 3/k 3	50	50	50
k 10/k 10, K 3/K 3	50	----	50
k 10/k 10, K 3/k 3	50	50	50
k 10/k 10, K 3/k 3	50	50	50

for all segregating loci. The data show clearly that preferential segregation occurs only when the chromosome 3 bivalent is heterozygous for the knob and when abnormal 10 is either homozygous or heterozygous. The slightly high percentage of preferential segregation of the A locus over that of the Lg locus in the K 10/K 10, K 3/k 3 class is anomalous but is almost certainly due to the relatively small population obtained for this combination.

M. M. Rhoades
E. Dempsey

6. Level of polyploidy and size of chloroplasts.

Using the elongate gene which when homozygous results in the formation of unreduced megaspores in plants at all tested levels of ploidy (Rhoades MNL 30), a polyploid series consisting of 1N, 2N, 3N, 4N, 5N, 6N and 7N plants has been obtained. Although not isogenic, the close relationship of the different polyploids permits a comparison of the effects of ploidy level on various characteristics such as height vigor, etc. One of the more interesting findings is that the size of the mesophyll chloroplasts is the same throughout the range of polyploid although the number of plastids per cell increases with level of ploidy. This independence of plastid size from nuclear constitution is further indication of plastid autonomy.

M. M. Rhoades

7. On the origin of abnormal 10.

During the course of the investigation discussed above on