$\frac{Rg\ gl\ lg\ a}{rg\ +\ +\ +}$ X rg gl lg a Σ = 1165

(0)	(0)	(1)	(1)	(2)	(2)	(3)	(3)	(1-3)	(1-3)	(2-3)	(2-3)	(1-2-3)	(1-2-3)
Rg	rg	Rg	rg	Rg	rg	Rg	rg	Rg	rg	Rg	rg	Rg	rg
gl	+	+	gl	gl	+	gl	+	+	gl	gl	+	+	gl
lg	+	+	lg	+	lg	lg	+	+	lg	+	lg	lg	+
a	+	+	a	+	a	+	a	a	+	a	+	+	a
256	270	4	7	89	97	196	162	2	4	38	39	1	0

Rg-gl = 18 ÷ 1165 = 1.5%
gl-lg = 264 ÷ 1165 = 22.7%
lg-a = 442 ÷ 1165 = 37.9%

Order is Rg gl lg a.

These data together with those from the lg-na-a backcross and from linkage data previously reported give the following linear order of genes in the long arm of chromosome 3, which is one of the best-marked arms of the maize chromosomes.

$$Rg\ \ gl_6\ \ ts_4\ \ lg_2\ \ na_1\ \ a_1\ \ sh_2\ \ et\ \ ga_7$$

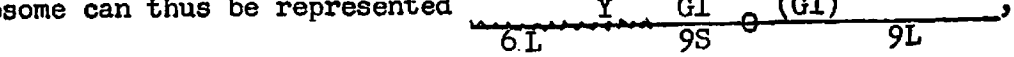
M. M. Rhoades
Ellen Dempsey

4. Tassels with 4N sectors.

In the course of pollen examination in a backcross population segregating for a translocation, it was noted that many tassels were sectored for two types of anthers. One type had small grains of the usual size and the other had larger grains. In plants expected to be heterozygous for the translocation, the first type of anther showed 50% abortion but the second type had mostly normal grains. Three plants were used as males in crosses to a 4N pr stock. Two of these carried the translocation and the other had normal chromosomes. The resulting ears had many plump seeds as well as some shrivelled seed. One ear had all Pr seed while the others were segregating Pr and pr. Ratios of 62 Pr: 15 pr and 91 Pr: 24 pr indicate the pr allele was in duplex as would be expected if doubling had occurred in a Pr/pr plant. Apparently the tassels contained tetraploid sectors. No such sectors were found in related material the previous year. The population in question was located downhill from an experiment involving treatment of seeds with various chemical mutagens. It is possible that washing of these chemicals affected the developing tassels and caused somatic doubling.

Ellen Dempsey

5. Linkage of Gl_{15} and Y_1 in homozygous T6-9b.

A population of 1070 plants from a backcross of y T Gl wx c / Y T gl Wx C was found to give 34.3% recombination for C-Wx, 7.3% Y-Gl recombination and independence of Wx-Y and Wx-Gl. The 9 chromosome can thus be represented 

,