of the corn-grass phenotype by dosage effect. Therefore, C8 is apparently
distal to the translocation, as would be expected from its map position.

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2. Location of TB-5a with respect to marker loci.

A B-type translocation involving the long arm of chromosome 5 has
apparently been separated from the X-ray induced translocation complex,
involving chromosomes 5, 6, and a supernumerary, reported in MNL 42:132.
Pollen sterility has dropped from the original 60-75% to about 30%. It
now seems appropriate to name this translocation, so it is designated
TB-5a.

The breakpoint of TB-5a lies between v3 and bv1, the former being
proximal and the latter distal.

Incidental information regarding td (thick-tassel dwarf) and na2
may be of interest here. Both are proximal to TB-5a and both appear to
be closely linked to the translocation. Since bv1, td, and na2 plants
are all somewhat dwarfed, the stocks were intercrossed to test for
allelism; $Na_2/na_2 \times bv_1$ and $Td/td \times na_2$ gave wholly normal progenies.
The additional observation that $na_2$ and td are proximal to TB-5a and
that $bv_1$ is distal makes it evident that the three represent distinct
loci.

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3. Patterns of nucleolar distribution at the quartet stage of meiosis in
tetraploids.

There are two nucleolar organizers located on the short arm of
chromosome 6 in each microspore of a quartet formed from meiosis in a
tetraploid. They each may form a small nucleolus or they may combine to
form one large nucleolus. The greater the proximity of the nucleolar
organizers, the greater is the probability that they will function to-
gether to form only one nucleolus. Consequently, the presence of only
one nucleolus indicates that the short arms of chromosome 6 are close
together.

There are six major types of patterns possible in a quartet.
They are shown in Table 1. The plane of first division is very difficult