

3. Transposition sequences of Ac

In the study described above, it has been possible to follow transpositions of Ac through several sequential steps. Three of them occurred in the ancestry of the plant that gave rise to the mutable bronze condition. Ac was first present in a plant having the constitution I Sh Bz Wx Ds/C Sh Bz wx ds and it showed no linkage with these markers in chromosome 9. It then appeared in an I Sh Bz Wx Ds-carrying chromosome at a position that was approximately 20 crossover units to the right of Ds: I Sh Bz Wx Ds Ac. Ac was then inserted just to the left of and coincident with this was insertion of Ds to the left of Sh: Ac I Ds Sh Bz Wx. Ac then appeared at the bronze locus in a gamete of a plant having this last position of Ac, and it produced the mutable condition described above. From this position, in turn, its insertion at several other locations has been determined: to positions not showing linkage with markers in the short arm of chromosome 9, to a position close to sh₁, and to a position that is very close to wx. The removal of Ac from this last location coincident with its appearance at a new location, not showing linkage with markers in the short arm of chromosome 9, has also been followed.