12. Test for non-homologous crossing-over in translocation heterozygotes.

In meiocytes heterozygous for a translocation, the commonly observed non-homologous pairing might result in occasional non-homologous crossing-over. The products of such events would be short interstitial deficiencies and insertions, including the segment between crossover and break. If the break is near a known dominant gene, deficiencies could be detected as "mutations" to the recessive, and could be verified by their transmission frequency and cytology. It is to be expected that the frequency of such events would be very low, for intuitive reasons as well as for the lack of previous detection of events of this sort. A small test of several translocations was run in 1955, crossing heterozygous translocation, homozygous dominant for nearby gene, to the recessive.

Transl.	Test genes	Number	Cases
3-9f	sh	2,378	0
2-9c	wx	4,937	0
$6\text{-}9_{8536\text{-}12}$	y, sh	6,718	0
$8\text{-}9_{8525\text{-}1}$	sh, wx	2,822	0
$6\text{-}9_{8439\text{-}6}$	y, sh	120	0
$5\text{-}9_{8457\text{-}5}$	sh	2,297	1 sh
4-7a	su	1,320	0
4-5g	su, pr	3,739	0

The one sh exception will be tested for transmission of C. $T5\text{-}9_{8457\text{-}5}$ involves 5L.76, 9S.84.

E. H. Coe, Jr.