



FIGURE 22.18. Genetic analysis of incompatibilities between *Drosophila mauritiana* and *Drosophila simulans*. A white-eyed stock of *D. mauritiana*, homozygous for the recessive w^- allele, was transformed by injecting transposable elements into embryos. These elements inserted at random locations in the genome. The transformed flies were red-eyed because they had been engineered to carry the wild-type w^+ allele. Replicate lines were backcrossed to a white-eyed *D. simulans* stock, which also carried the w^- allele, for 15 generations, with red-eyed flies being selected in each generation. After 15 generations, each backcrossed line contained a segment from *D. mauritiana*, which represented, on average, 7% of the genome. (See p. 403 for more on this method.)

22.18, redrawn from True J.R. et al., *Genetics* **142**: 819–837, © 1996 Genetics Society of America