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Authors

Waser, Nickolas M

Price, Mary V

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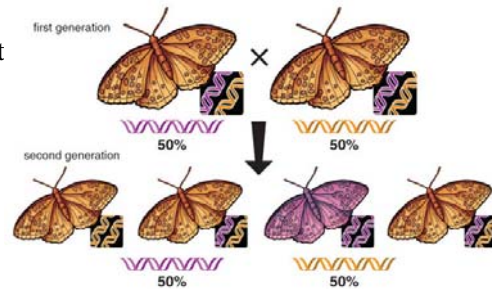
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Hardy of Hardy-Weinberg

To the Editors:

The Hardy-Weinberg principle has a fascinating history, as told, for example, by Will Provine in *The Origins of Theoretical Population Genetics* (University of Chicago Press, 1971 and 2001). In trying to explain observed ratios of phenotypes in populations, early geneticists sometimes confused two contributing factors: how genes are combined into genotypes via patterns of mating (or, the mating system), and how interactions between genes at a single locus influence what phenotype is produced (meaning, effects of dominance).

G. H. Hardy focused on the former factor, showing that a single episode of random mating converts any set of starting genotypes at a single locus into a new set whose frequencies, in the case of two alleles, follow the terms of a binomial expansion. Alas, the confusion of early geneticists still seems to be with us, judging from Daniel Silver's otherwise fine article on Hardy ("[In Defense of Pure Mathematics](#)," November–December).



Even if we assume that the figure on page 421 intends to include phenotypic expression, we can make nothing of the colored DNA molecules and the surprising change in their frequencies. Unfortunately, the caption throws no light on either genotype or phenotype frequencies, fails to emphasize the conclusion that genotype frequencies reach an equilibrium under random mating when gene frequencies remain constant, and misses the opportunity to show how this equilibrium is derived.

Nickolas M. Waser
Mary V. Price
University of California, Riverside, Emeriti
Tucson, AZ

The Editors respond:

Thanks to Drs. Waser and Price for bringing this detail to our attention. The numbers shown in the illustration should give the allele frequencies of 50 percent for both the dominant and recessive versions of the gene. Under Hardy-Weinberg equilibrium, these allele frequencies would also stay the same in the second generation. We regret that this error was overlooked. The numbers have been corrected in the online version of this article, as shown above.