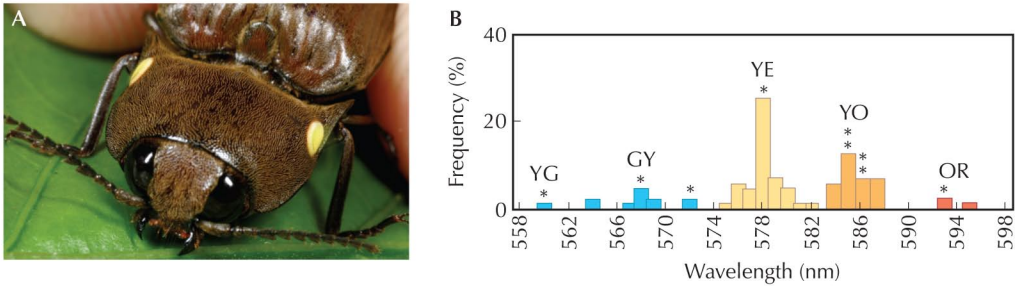

FIGURE 19.24. Sequence diversity gives evidence for selection on a color polymorphism in the Jamaican click beetle, *Pyrophorus plagiophthalamus*. (*A*) Two different luciferase genes are expressed in the dorsal and ventral light-producing organs (only thge dorsal organs are shown), and variation in each of these genes is responsible for separate polymorphisms. The ventral luciferase has three alleles, yellow-green (vYG), yellow (vYE), and orange (vOR). (*B*) The three alleles generate five phenotypes; vYG homozygotes (labeled YG), vYG/vYE heterozygotes (phenotype GY), and so on. The McDonald–Kreitman test shows a significant excess of amino acid change in the region that affects color. The vOR alleles show significantly lower sequence diversity than the vYE alleles (π = 0.00046 vs. π = 0.00129), suggesting that the vOR allele has recently increased.

19.24A, photo courtesy of Jeffrey L. Feder, University of Notre Dame; **19.24B,** redrawn from Stolz U. et al., *Proc. Natl. Acad. Sci.* **100:** 14955–14959, © 2003 National Academy of Sciences, U.S.A.