



FIGURE 13.15. Examples of several kinds of molecular variability (see Box 13.3). (A) Variation at the *Esterase 5* locus of a population of *Drosophila pseudoobscura*, detected using allozyme electrophoresis. (B) Single-nucleotide polymorphisms (SNPs) in a sample of 20 human chromosomes. (Yellow) Variant bases; (light blue) missing data. Only 59 of the 147 sites that vary in this 31-kb region of chromosome 21 are shown. (C) A 51-bp section of the cytochrome oxidase 3 gene from two earthworms, *Lumbricus rubellus*. The two traces show the output from an automatic sequencing machine. There is a single insertion/deletion of a TTT triplet and five single-base changes. (D) Microsatellite variation in red deer (*Cervus elaphus*). Electrophoretic traces are shown for three individuals; peaks indicate the length of the microsatellite allele, which varies with the number of AC repeats. These three individuals are heterozygous for 17 and 20 repeats (red), homozygous for 17 repeats (blue), and heterozygous for 18 and 24 repeats (green).

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