FIGURE 21.6. The wasp Nasonia vitripennis (A) provides an extreme example of sex-biased inheritance. Like other Hymenoptera (bees, wasps, and ants) this species is haplodiploid: Fertilized eggs develop as diploid females, but unfertilized eggs develop as haploid males (B). In many populations, a supernumerary B chromosome is found, called PSR (paternal sex ratio; green dot in C). Fertilized eggs that carry this chromosome eliminate the paternal genome (red), so that they develop as haploid males instead of diploid females (C). Thus, PSR gains an advantage by shifting reproduction toward males, the sex through which it is transmitted. (D) The normal haploid set of five chromosomes in a male; (E) the extra chromosome in a male carrying PSR (arrow).

21.6A, photo courtesy of Michael E. Clark; 21.6D,E, reprinted from Nur U. et al., Science 240: 512–514, © 1988 American Association for the Advancement of Science

Evolution © 2007 Cold Spring Harbor Laboratory Press