

**FIGURE 23.8.** Examples of asexual reproduction in eukaryotes. (*A*) The all-female lizard *Cnemidophorus uniparens* and (*B*) the fish *Poeciliopsis monacha-lucida* are hybrids between two sexual species, which produce diploid eggs that go on to produce genetically identical offspring. In *B*, development still requires fertilization by sperm from *P. monacha*, but the sperm genome is discarded. (The larger fish is an asexual *P. monacha-lucida* and the two smaller fish are male *P. monacha*.) (*C*) The plant species *Antennaria parvifolia* contains both sexual and asexual females. (*D*) The parthenogenetic ostracod *Darwinula stevensoni*. Note the eggs in the brood pouch at *lower right*. All fossils of this species have such eggs, which implies that this species has been asexual for ~100 Myr. (Recently, however, living males have been found, suggesting that there may be occasional sexual reproduction.)

23.8A, photo courtesy of Carl Lieb, Laboratory of Environmental Biology, University of Texas, El Paso; 23.8B, photo courtesy of Robert C. Vrijenhoek, Monterey Bay Aquarium Research Institute; 23.8C, © Robert Bielesch; 23.8D, reprinted from Butlin R., *Nat. Rev. Genet.* 3: 311–317, © 2002 Macmillan, www.nature.com