

Life Chapter 23—Speciation -- Questions and Comments
Conservation Biology
Spring 2009

1. Know the following terms (many of which will also be covered in class:

Morphological species concept	speciation	Reproductive isolation	Biological species concept (BSC)
Allopatric (geographic) speciation	Sympatric speciation	polyploidy	Autoploidy (autopolyploidy)
Allopolyploidy (allopolyploidy)	Hybrids, hybridize Hybrid zone	Evolutionary and adaptive radiations	clade

We will go into more detail than the book does in regards to allopatric speciation. We also will see that there are more definitions and concepts of species than are mentioned in the book. However, pay particularly close attention to the biological species concept as it is the one most commonly used in laws regarding conservation. Also read over the sections on sympatric speciation and polyploidy carefully – recall that we mentioned polyploidy earlier and I warned you that we would revisit it – now is that time and you may find it useful to review diploid/haploid concepts in the notes and in the *Life* book. Figure 23. 7 is particularly useful – know it.

Figure 23.4 illustrates character displacement in bill size as a major force in an adaptive radiation. Not all of the bill sizes and shapes are due to character displacement but the beaks that are basically the same shape but of different sizes likely are the result of character displacement.

Note carefully the interactions (reinforcement) and lack thereof between pre-zygotic and post-zygotic isolating mechanisms. Note the centrality of these concepts to the BSC.

Note that hybrid zones are very important, as are hybrids in general.

Know why adaptive radiations occur.

Be able to answer all of the questions in the "recap" boxes and try the self-quiz at the end of the chapter.