

**Bio. 3302, Introduction to Evolution
Study Guide, Lecture 15
Aging and Life History Characters**

Important Terms and Concepts

Clutch Size
Energy Optimization
Evolutionary Theory of Aging (Senescence)
K-selection
Logistic growth Curve
Mortality
Optimal Balance
r-selection
Rate of Living Theory
Reproductive Success
Senescence
Telomere
Telomere Theory of Aging
Trade-offs

Discussion Questions

1. What are some basic ways in which organisms differ in their life history characteristics?
2. Why are some species said to be "r-selected" and others to be "K-selected"? Provide a short list of characters for each type.
3. Describe the Rate of Living Theory of Aging. What are the predictions? How well are they supported in nature?
4. Describe the Telomere Theory of Aging. What evidence supports it, and what does not?
5. Describe the Evolutionary Theory of Aging. How is natural selection related to aging in this theory?
6. What factors might influence the optimal clutch size in birds and other animals?
7. How might life history changes contribute to the rapid distribution and evolutionary success of invasive species? Give an example or two.