

Extra credit assignment

The following articles apply ecological concepts to topics that affect the well-being of humans: emerging diseases, the size of the human population, and reduced biodiversity. For extra credit, you may read and report on any or all of these articles.

Schrag, Stephanie J. and Pamela Wiener. 1995. Emerging infectious disease: what are the relative roles of ecology and evolution? Trends in Ecology and Evolution 10: 319-324.

Although this article was written before West Nile Virus, SARS and Bird Flu made headlines, the ecological concepts that it discusses can be applied to understanding any of these “emerging” diseases.

Cohen, Joel E. 2003. Human population: the next half century. Science 302: 1172-1175.

This article discusses how human demographic changes, including changes in birth rates, death rates, and migration, are likely to affect the global population by 2050.

Chapin, F. Stuart, Erika S. Zavaleta, Valeria T. Eviner, and others. 2000. Consequences of changing biodiversity. Nature 405: 234-242.

Humans are causing a tremendous reduction in biodiversity, and this article discusses how ecological concepts can help explain the link between biodiversity and ecosystem functioning, and how changes in ecosystems can have costly effects for humans.

For each article that you choose to read, turn in the following:

1) Summarize the article in one paragraph. Be sure to focus on the main points and use your own words. (0 – 5 points per article)

2) Discuss how the article relates to ecology. Try to explicitly relate points in the article to specific points from class. This part can be as long and detailed as you want. (0 – 5 points per article; possibly more if the discussion is extremely in-depth and insightful)

3) Write thoughtful questions that you have about the article. Begin with a sentence or two that describes the context for the question (e.g., what the writer said, what you know about biology). Then ask a question that relates to the content of the article. Good questions will try to deepen your understanding of ecological concepts, or will try to relate the content of the article to other ideas. You may write as many questions as you’d like. (0 – 5 points per article; possibly more for lots of insightful questions)

If you have completed these three articles and are interested in even more extra credit, you may search JSTOR’s Ecology collection for other review articles. A review article summarizes past research and does not include specific methods and results section. Send extra articles to me for approval BEFORE proceeding.