

Jared Diamond. "Easter's end." *Discover* magazine, August 1995. 16(8): 62-69.

Pre-discussion report. Due at the beginning of class, Thursday, March 4.

1) Write thoughtful responses to *two* of the following questions. Responses should put ideas in your own words and should draw support both from the article and from your own knowledge and ideas.

- a) The article describes the former abundance of trees and forests on Easter Island. Describe several factors that contributed to the extinction of trees on the island. What factors affected tree death rates? What factors affected tree "birth" rates (think about reproduction and germination of new seeds)? Imagine that you arrived on the island before the tree populations were extinct, but after the tree populations had started to decline. Suggest a management plan that could have helped the Easter Islanders save the tree populations from extinction. Be sure to consider both tree "birth" and tree death.
- b) Easter Island is described as having a mild climate and fertile soil, which should be favorable for a diversity of organisms. What have scientists concluded about the levels of plant and animal biodiversity on Easter Island in the past? Describe how scientific evidence supports these conclusions. How do current levels of plant and animal biodiversity on Easter Island compare with past biodiversity levels? Can today's levels of biodiversity on Easter Island be explained in terms of complexity and disturbance? Explain your answer.
- c) The article states that around 2,000 people were found living on Easter Island when European explorers first made contact with the island. However, the existence of the huge stone statues on the island suggests that the human population on Easter was once as high as 20,000. Estimate the carrying capacity for the human population on Easter Island. Justify your estimate with information from the article. Describe how biotic and abiotic factors contributed to the crash of the human population on Easter Island. Imagine that you can turn back time and visit Easter Island a thousand years ago (after the Polynesian settlers had arrived, but before the peak of statue construction). Describe specific advice that you could give to the settlers that would help them avoid the population crash. Justify your advice.
- d) Diamond likens the demise of the civilization on Easter Island with the overpopulation and resource destruction on the entire planet. Do you feel that this comparison is justified? Why or why not? What are the parallels? What are the differences? If we choose to heed Diamond's warning, what can we do to prevent a population crash of the entire human population? Describe how your suggestion relates to at least two of the following four ecological concepts: birth and death rates, carrying capacity, biotic and abiotic environment, biodiversity.

2) Write one thoughtful question 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 concepts, or will try to relate the content of the article to other ideas. The most interesting questions will be used to fuel our in-class discussion!