Core 1: Weekly Response Week #6

---------------------------------------------------------------------------------------------------------------

Due in hard copy and/or on turnitin.com the first discussion section class following lecture.

Name: Majok Ring Date: 3/1/15

------------------------------------------------------------------------------------------------------

Lecturer: Laura Martin

Lecture Title: “Evolutionary Biology: All Things Great from Small?”

Lecture’s Central Argument:

Everything in this world is subject to adaptation, be it ideas or organisms. Every large scale change and adaptation can be traced back to small individual causes. In order to properly view these causes, we must change our way of thinking from a linear perspective to one in which involves branching ideas/possibilities similar to that of a phylogenetic tree. Look at the surroundings, question what could have influenced this change, warp perspectives and look at related topics/events for more information. The process we use for making connections between species is very similar to that of any other process for analyzing ideas/events. Take for example the decrease in meerkat population due to a rift/valley which separates the two populations or even a mutation within an individual which increases their fitness in terms of survival and reproduction.

Lecture’s Supporting Evidence/Examples:

The jellyfish does not have large gaps in its evolution and can be analyzed at several different stages. A majority of these jellyfish share similar features such as the blue on their bells and similar array of tentacles. Martin describes variation as a heritable factor which is passed down from parent to offspring and is the main cause of evolution as with mutation. Each of these jellyfish although sharing many of the same general shapes and features, have specific adaptations that are a result of the environment and also their available resources.

Three questions you have with respect to this lecture:

* How do we collect data on jellyfish if they are difficult to tag and follow?
* Are negative aspects of habitat destruction such as deforestation ethically justifiable if they produce necessary resources for the masses?
* If the simpler solution is always more possible, why do we not simply accept gaps in certain species history as fact and halt research?

Other Core 1 subjects to which the lecture might be related: “Shifting the Origin: The Legacy of Copernicus, Galileo and Newton”- Christopher Viney: In order to solve questions or misconceptions, it is necessary to change our perspective/viewpoint in order to examine all of the possibilities.

------------------------------------------------------------------------------------------------------

Narrative Response (½ single-spaced page): Examine some aspects of the lecture in relation to the weeks’ readings and to other course subjects (lectures or readings) of interest to you. (Generic prompt)

Within this week’s lecture “Evolutionary Biology: All Things Great from Small?” by Laura Martin, our focus was primarily centered upon the concept that in order for us to properly analyze changes or evolutions within our universe, we must take the steps to first change our thinking and perspectives in order to reach reasonable conclusions. Take for example the aspect of natural selection and its effects on certain species. If we were to look at the peppered moth, Biston betularia. We would center our questions on why the light colored moths have become rare and what may have changed their colors. Instead of looking at this directly, we must adapt our own perspective and examine the environment it was in a how it has been changed. The change in color was a result of the Industrial Revolution in which large amounts of soot and waste within the air have stained the barks of trees and have exposed the lighter colored moths to increased amounts of predation. This change was a direct cause of our resources and impacts and can allow us to put more thought into our own actions and how they might affect the environment and ecosystems. This topic human disruption of the environment is highlighted within Abigail Tucker’s “Jellyfish: The Next King of the Sea”. She emphasizes this within her statement “It’s hard to tell what may be causing jellyfish to proliferate. The fishing industry has depleted populations of big predators such as red tuna, swordfish and sea turtles that feed on jellyfish” (Tucker 2). Here by simply fishing for resourses/food such as fish, we are reducing the amount of predators that can prey on these jellyfish, thus directly impacting the marine environment. Once again, it is easier to shift our origin and change our perspective in this case and focus on the decreasing numbers of swordfish and red tuna and ultimately draw the problem back to overfishing and further expand on this point by relating it to the tragedy of the commons in which the environment suffers because of selfishness by people/countries. As you can see, this conclusion was not brought randomly, but was reached through numerous stages of progression in which you can clearly see the causes, relationships, and effects. Jellyfish population increasing🡺 Why🡺 Decreasing red tuna/swordfish🡺 Why? 🡺 Overfishing 🡺 Why? 🡺 Tragedy of the commons.