

Questions on Darwin -- January 28, 2008

Leah

What does Darwin see as preventing species from taking over the world as they reproduce exponentially? Or if that one's no good, How does the Struggle for Existence relate to Natural Selection?

Stephanie

When did Sir Charles Lyell publish his geological work, and was the young/old earth debate contemporaneous with the release of *The Origin of Species*? Was the public aware of the doctrines of DeCandolle and Malthus, and used to scientific debates, or was *The Origin of Species* the first real impingement of scientific theory on readers' everyday lives and self-concepts? The book's extraordinary print run seems to suggest this. What was the state of the medical field at the time of writing?

JP

I didn't quite understand Darwin's reasoning for the separation of the sexes in flowers. So... How is the separation of the sexes in flowers advantageous to their survival? I feel the flowers would be more easily fertilized if the stamens and pistils were in closer quarters.

Jillian

I just wondered if we could talk more in-depth about the 'physiological division of labour' Darwin mentions on page 7. I understand that there are cases where specialization such as sex are useful, of course, but I'm not sure I understand how specialization in sex can help a tree. Cross-breeding is encouraged, of course, but with trees being spaced so far apart, it seems they're decreasing their immediate chances to reproduce by limiting sexual possibilities. It seems odd.

Hanna

What are the differences between natural and sexual selection, as described on page 8, and why does sexual selection only "give characters useful to males alone"?

Kevin

Darwin, on pages 6 and 12, argues that habits, or instincts are selected for. On page 6 he says that the tendency of cats to catch rats rather than mice is known to be inherited. Is there any basis for this? I thought that skills like these were acquired or learned, or simply necessitated by an organism's environment. On page 12, though, he talks more

about acquired instincts, which makes a bit more sense to me. But are instincts actually hereditary and selected for? I guess I just thought that only physical traits were passed on.

Max

And here's my question: What are the benefits/disadvantages for two different species if they become modified and adapted to one another as time goes on?

Joo Hyun

Darwin said "Dominant species belonging to the larger groups tend to give birth to new and dominant forms; so that each large group tends to become still larger, and at the same time more divergent in character." How come species become more divergent instead of more simplified?

Kevin

I was wondering what Sir Charles Lyell's views were and how they conflicted with Darwin's observations- in the passage on page eight, he doesn't go into much detail.

Also, Darwin does posit a common ancestor, but within the limited scope of the time, did he have any idea what characteristics that ancestor would have?

Kerry

How does Darwin characterize the influence of humans on Natural Selection? Does he view this involvement positively? How did he feel his findings on Natural Selection would influence domestic production?

Ben

In most developed countries humans do not have to struggle to exist and arbitrary factors (factors that don't contribute to survival) often seem to influence our ability to procreate. In the long run is our contemporary culture going to hurt humanity? Will the lack of selective pressures lead to eventual tragedy?