

Evolution Vs. Creationism

Gallup poll: The Origin of Man reported Sept. 4, 1982

- A. God created man pretty much in his present form within the last 10,000 years. 44 percent
- B. Man has developed over millions of years from less advanced forms of life, but God guided the process. 38 percent
- C. Man has developed over millions of years from less advanced forms of life. God had no part in the process. 9 percent
- D. I do not know. 9 percent

Evolution Vs. Creationism

Results for our class 4/16/02

- A. God created man pretty much in his present form within the last 10,000 years. 61 percent
- B. Man has developed over millions of years from less advanced forms of life, but God guided the process. 27.5 percent
- C. Man has developed over millions of years from less advanced forms of life. God had no part in the process. 9 percent
- D. I do not know. 2.5 percent

Creationism: God created man pretty much in his present form within the last 10,000 years.

Intelligent Design: The variety of life on Earth results from a purposeful design and a higher intelligence guides the process.

Evolution: All living things developed from earlier forms through slight variations over time. Natural selection drives the process

The Greek legacy:

Aristotle, 4th century B.C.:

All living things on earth could be arranged in an unchanging hierarchy according to complexity---like a ladder with simple forms at the bottom and the most complex (naturally that's us) at (where else?) the top

Species do not change. Nature does not change.

Theory of evolution by natural selection

Bishop Ussher – Creation 9:00 AM, Oct 22, 4004 BC

Charles Lyell "Principles of Geology" Published in 1830

The earth had a long history

The fossil record

Thomas Malthus "Essay on Population"

Population multiplies faster than food

Jean-Baptiste de Lamarck – Inheritance of acquired characteristics

Alfred Russell Wallace

Wallace

Charles Darwin – Published "The Origin of Species" in 1859

Darwin Cartoon

Is Evolution a Theory?

No, evolution is a fact. The theory concerns the way in which evolution has taken place.

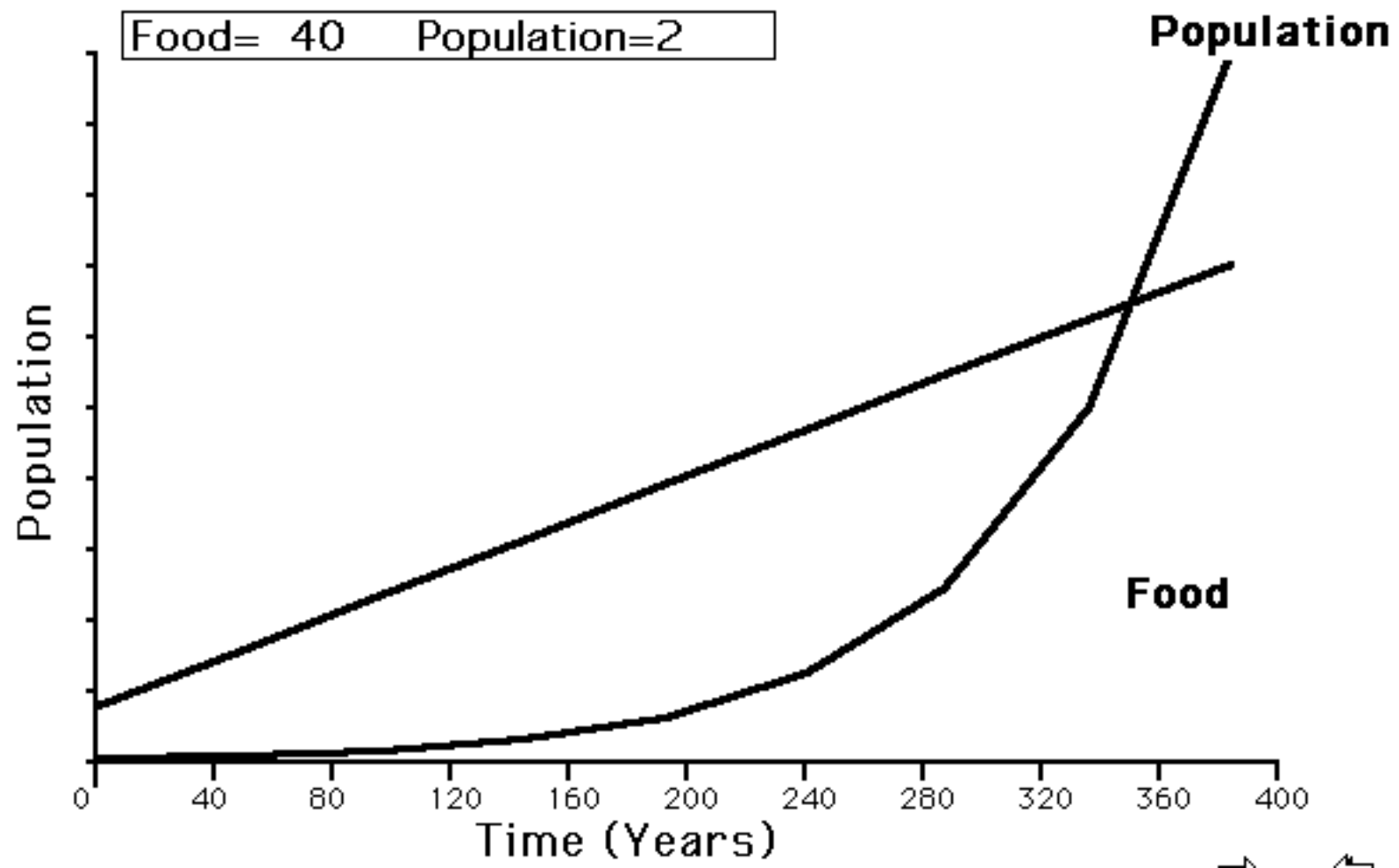
Darwin proposed evolution by natural selection

Does the theory of evolution say that we are descended from monkeys?

No, but we do have a common ancestor.

Malthus – Population increases geometrically, food increases arithmetically

Food= 40 Population=2



Limited Food and Space

1. Since food and space on the earth are limited, more organisms are produced that can be supported.

Variety

2. Variety exists even among members of the same species. Many of these variations are inherited and can be passed on to the individual's offspring.

Success of some Individuals but not others

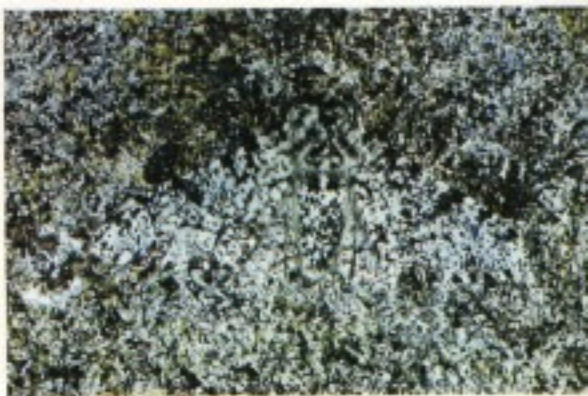
3. Since individuals vary, some are more successful than others at leaving offspring. This depends on two factors: First, some individuals do not survive to become parents and, second, some individuals produce greater numbers of offspring than others.

Inheritance of Traits of Successful Organisms

4. At least some of the characteristics that determine whether or not an individual survives to produce offspring and the number of offspring which it can produce are determined by its genetic make-up -- its genes. Some inherited characteristics make the individual more successful (more "fit" as Darwin would say) at surviving and/or producing offspring.

Natural Selection

5. Forces present in the individual's environment ultimately determine which individuals are most successful at surviving and reproducing. Pressures in the individual's environment -- "Nature" --select for or against each individual.



Pepper Moth

species = groups of actually or potentially interbreeding natural populations

population = individuals of the same species living in some defined area.

Evolution = (in a biological context) a change in the genetic content of a population with time.

populations evolve -- individuals do not. An individual's genetic make-up is fixed from the moment of conception.