• archaeology =
  – explanation of past human behavior using physical remains
• antiquarianism =
  – exploitation of human past for personal gain
• foundations I:
  – James Usher
    • “Young Earth”
  – Charles Lyell
    • Uniformitarianism =
      • “Old Earth”
• foundations II:
  – John Ray
    • “fixity of life”
  – Carl Linnaeus
    • intermediate forms
  – Boucher de Perthes
    • controversy over the “pre-Adamites”
  – Thomsen & Worsaae
    • regular stages
• biological/cultural uniformitarianism?

• archaeology =
  – explanation of (past) human behavior using physical remains

  – explanation: emphasis on “how” and “why” questions
  • how did people organize themselves into social groups
  • how did people exploit their surrounding environments
  • why did people eat, make tools, believe the things that they did
  • why did societies change through time

The human life-way has changed dramatically over time.

Archaeology allows us to (1) learn about human life in the past, and (2) lay out the sequence of changes through time and ask both HOW and WHY those changes occurred.
• antiquarianism =
  – exploitation of physical remains of (past) human behavior for personal gain
  – Indiana Jones and Lara Croft are antiquarians

• archaeology arose from antiquarianism
  – have to be interested in the past—even if it is for base financial reasons—before you can have a desire to explain it

• how to get from antiquarianism to archaeology?
  – two historical barriers to the development of a modern archaeology
    1. recognition that humans have an ancient past (i.e., time depth)
    2. recognition that natural processes can describe change in natural systems (including life)

View that the Earth (and humanity) has an ancient history is a very recent idea

No need for explanation of change!

• Archbishop James Usher (1580-1656) “Young Earth”
• Charles Lyell’s “Old Earth”

Sir Charles Lyell
1797-1875

Catastrophism =
• never observed calamities!

Uniformitarianism = processes observed in the present also operated in the past

• Uniformitarian calculations for the “Old Earth”
– minor process x long time = big result
– big result ÷ minor process = long time

100m thick ÷ .001 m/year = 100,000 years!!

• Abiotic face of the Earth may have changed, but certainly life was created and has remained fixed?

ok, not by design...
too perfect to not be by design...

• Fixity of Life
– “fit” between organisms and environment evidence of God’s wisdom

• Natural Theology
– wisdom of God understood by studying the features of his Creation
– classification of organisms = Divine Order of Creation

John Ray (1628-1705)
• Carl Linnaeus (1707-78)
  – *Systema Natura* 1748
  – Linnaean taxonomy still used today
  – a systematic attempt to catalog all of God’s creatures

• Transitional Forms
  – how evidence of God’s wisdom?
  – life is changeable!
  – strange fossils in a new light
    • extinct organisms
  – humans too?

• Jacques Boucher de Perthes (1788-1868)
  – stone implements with the bones of extinct animals
  – proof that humans were part of the “Old Earth”
  – implied that life-ways very different on the “Old Earth”
  – when? an earlier creation not mentioned in the Bible?

• human life-ways have changed since ancient times

• Christian Jurgensen Thomsen (1786 – 1865) & Jens J. A. Worsaae (1821-1885)
  – Observed a regular sequence of changes in human technology in several areas of Old World Europe

• The “Three Age System”
  – successive periods characterized by technologies made of…Stone → Bronze → Iron

• cultural/biological uniformitarianism?
  – biological, behavioral and cultural processes observed today also operated in the past

• cultural uniformitarian calculations?
  – minor cultural process x long time = BIG RESULT

• What cultural processes? How and Why does they work?

• …come back next class…