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?

Enduring Record
Simple Oldowan Chopper from Olduvai Gorge, Tanzania, ca. 2.0 ma
TIME DEPTH → past human behavior

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

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

**No need to explain change!**
Archbishop James Usher (1580-1656) “Young Earth”

*Genesis Chapter 11.*

**11:10** These are the generations of Shem: Shem was an hundred years old, and begat Arphaxad two years after the flood: **11:11** And Shem lived after he begat Arphaxad five hundred years, and begat sons and daughters. **11:12** And Arphaxad lived five and thirty years, and begat Salah…

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Charles Lyell’s “Old Earth”

- Catastrophism = Never observed calamities!
- Uniformitarianism = processes observed in the present also operated in the past

Saturday, October 22, 4,004 BC

6:30 AM

- 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…

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
  - ice age organisms now extinct
  - reasonable change…
  - humans too?

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

Jacques Boucher de Perthes (1788-1868)
- stone implements with the bones of extinct ice age 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?

Jacques Boucher de Perthes’ drawings of the Somme River gravels, France
human life-ways have changed since ancient times

Christian Jurgensen Thomsen (1786 – 1865) & Jens J. A. Worsaae (1821-1885)

- Observed regular sequence of changes in human technology in several areas of Old World Europe
- The “Three Age System”
- successive periods characterized by regular changes
  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…