Introduction to Zooarchaeology

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Zooarchaeology:

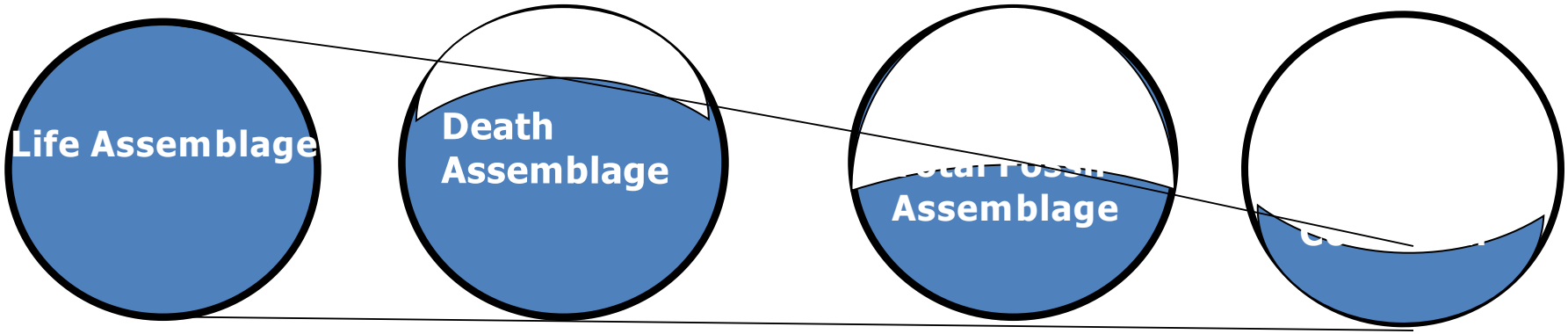
The study of animal bones from archaeological sites.

Juvenile pig mandible from James Madison's childhood home.

Zooarchaeology Research Themes: Human-Environment Interactions

Taphonomy: "The study of the preservation and destruction of archaeological assemblages"

- Much of what is buried is not preserved.
  - More fragile bones are destroyed.
- We can never know what was lost.



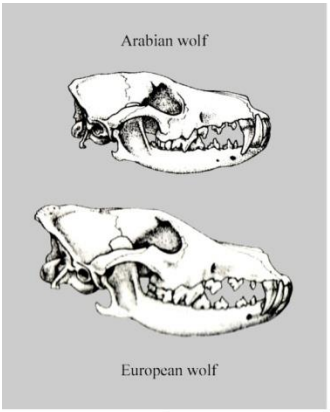
Diet

- Meat usually minor portion (<25%) of human diet.
- Bones are a *proxy* for edible meat.
- Many animals were not used for food.

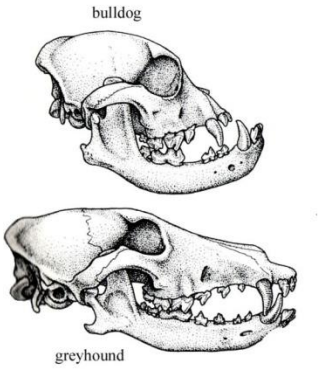
PS- we eat too much meat!

Domestication

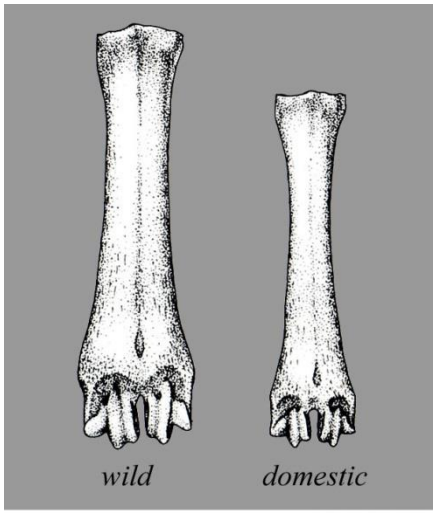
- A *process* resulting in genetic change.
- Often affects skeletal morphology (shape).



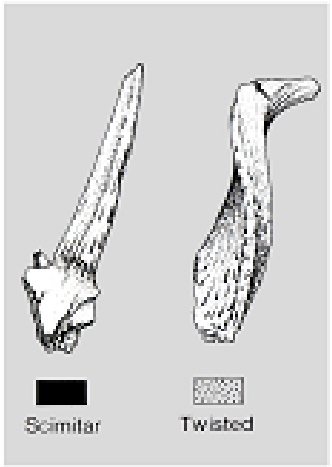
WOLVES



DOGS



Evidence of goat *diminution* in connection with domestication, based on metacarpal sizes



Hunting/Fishing/Trapping

- Humans weigh cost/benefits
- What should I hunt?
- Where should I hunt?
- When should I hunt?
  - Seasonality




http://www.livingwilderness.com/wildlife/desert-tortoise.html
http://aquaculture.ako.net.nz/?p=137
http://www.astronomy-images.com/day-images/California/jackrabbit.htm

Butchering and Transport

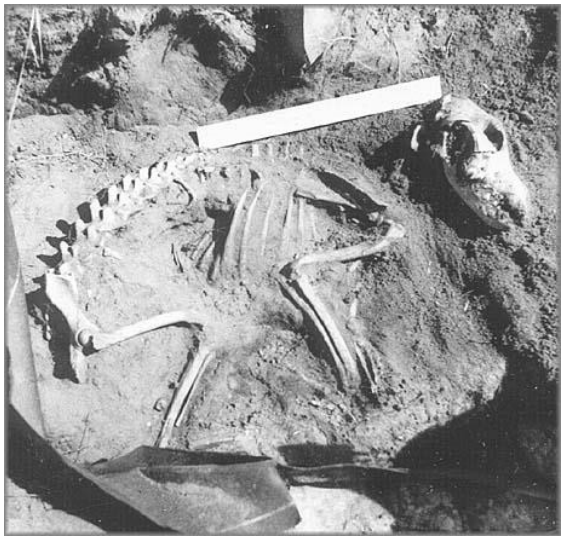
- What to do with the carcass?
  - Transport it whole?
  - Only take the good stuff?
- Decision based on:
  - Size of animal
  - Distance
  - Availability of resources
  - Other variables (cultural preference)

Society and Culture

- Humans don't always behave like other predators…
- Food conveys cultural and social meaning.

Ritual

- Ceremonial Objects
- Burials
- Offerings
- Feasting



Environmental Reconstruction

Animal remains can help reconstruct ancient environments.

- Small animals good indicators of microenvironments.

Distinguishing Classes of Vertebrates

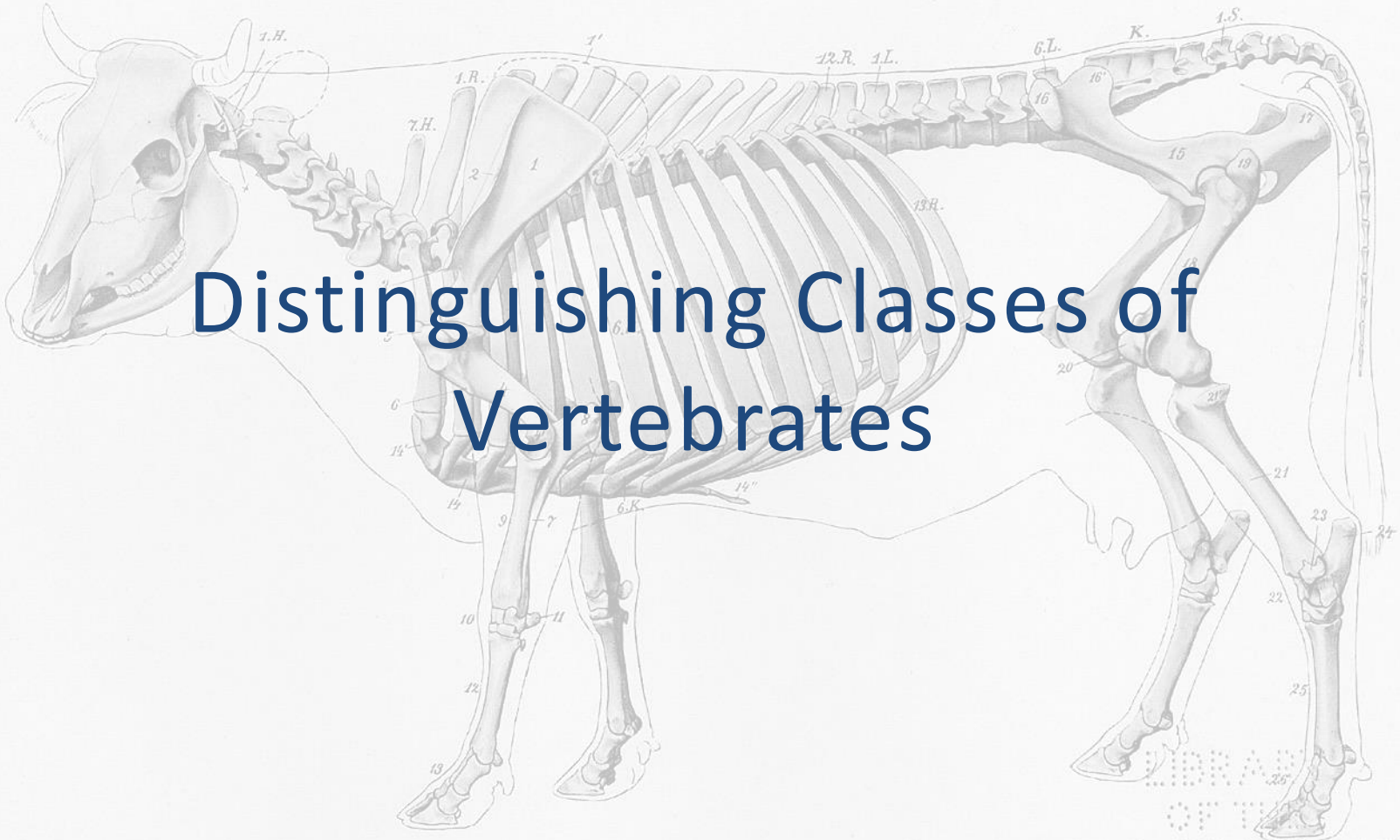


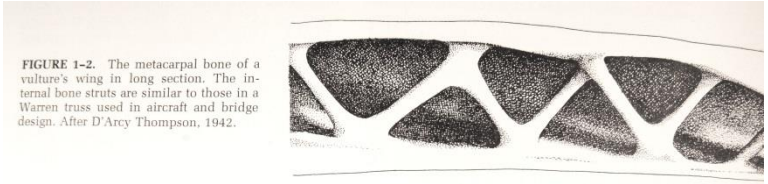
Fig. 3.

Mammals

- Thick outer layer
- Lots of spongy bone
- Fusion lines visible
- “Thunk” when tapped on table
- “Earthenware”

Birds

- Thin outer layer
- Very little spongy bone
- Fusion lines sometimes visible
- “Ping” when tapped on table
- “Bone china”



Reptiles and Amphibians

- Variable
- No fusion lines
- Ends of bones indistinct
  - Cartilage “plug” may be visible

Fish

- Wafer thin
- Translucent
- No distinct articulations
- Sounds like dropping a potato chip
- “Fish chips”

Environmental Reconstruction Exercise