Neanderthal biogeography

- home range = entire area occupied by individual or stable group throughout the life of the animal(s); contains all of the resources to fully support life.

- biogeographic range = the entire geographic area occupied by a species at a point in time providing sufficient conditions (abiotic & biotic) for survival
- population sizes
  - absolute v. relative estimates

- W. Europe MP:UP sites 1:5
  - control for site “type” (e.g., look only at camps)
  - biased measure? cave sites preserved over middle-term
  - fewer sites = fewer people

- S. African limpet & tortoise sizes
  - light predation pressure = high average prey sizes
  - heavy predation pressure = low average prey sizes
  - assumes optimal foraging
  - low predation pressure = low population densities

- low carrying capacity?
  - are lower neanderthal population sizes simply the result of climate change?
    - glacials = low resource availability = low RS
    - neanderthal sites rare at peak cold OIS 6(?), 4

- low carrying capacity?
  - are lower neanderthal population size a result of less efficient resource capture?
    - neanderthal culture /technology not as efficient as in Upper Paleolithic, thus RS is low!
    - even if rate of energy capture was equal to that of the UP, growth and development was more costly; thus RS is low!
- small home ranges
  - local range: 70-98% of stone raw materials come from sources <5km away
  - middle range: 2-20% of material from sources 5-20km away
  - distant range: <5% from sources >30 km away
- C. European and E. African exceptions
  - a few materials transported over >300 km

- a-seasonal ranges
  - sites are occupied year-round
  - camps are NOT shifted on a seasonal basis to take advantage of resources available during different seasons
- archaeological evidence
  - gazelle cementum annuli

- non-specialized subsistence: prey taken in proportion to relative abundance in the environment
  - no preference/selectivity
  - take whatever you encounter
- specialized subsistence: prey taken not in proportion to relative abundance
  - specific prey preferred/selected
  - don’t take whatever you encounter

LSA, MSA & brown hyena exploitation of Cape Fur Seals

MSA hominids like brown hyenas?
Comb Grenal, France 115-45 ka

**hunting vs. scavenging**
- top predators v. confrontational v. non-confrontational scavengers
- body part utilities

changes are too smooth?

"hunting vs. scavenging"
- some resources too risky even if encountered
  - elands vs. buffalo in S. African MSA
    - adult elands more common, adult buffalo less common than expected
Mauran, France, 35-45 ka
bison cliff drive

- hunting equipment
  - wooden spear tips
    - Schoningen, German, ca. 400 ka
    - Hoxne, England, ca. 300 ka
    - Lehringen, German ca. 250 ka
  - Levallois & Mousterian points
    - hafting evidence & tip fractures suggest use as projectile points

Life is dynamic…