New Worlds
Modern humans spread out

Art
- Not hunting magic
- Not just pictures of world
- Link to social/ritual activity
  - Special places, "sanctuaries"
  - Used & re-used

Hunted animals rarely painted

Records?
- Representations
  - Spring

Spear-thrower
- World's oldest joke?

The world filling up after 50,000bp
Mammoth architecture!

Collaborative effort

Social differentiation?

Colonizing Australia

- The first "New World"
  - How did they get there?
  - When did they get there?
  - How did they live?

Australia: water gap

- Wallace line
  - Ecological barrier
  - Marsupials isolated

Sahul

- Low sea levels
  - Coastal plain
How did they get there?

- By boat

Rapid colonization

- Starter population = 25 people
- Doubles every 100 years
- = >750,000 people in 1500 years
  -- Estimated population density at time of European contact

Many sites by 35,000 bp

- Ancient reefs
  -- Digging tools

Many sites by 35,000 bp

- Lake Mungo

Lake Mungo

- Shellfish
- Informal tools
- Skeletons
  -- Cremated
  -- Ochre
  -- Old dates?  > 60,000?

Dating questions

- Uranium series
- ESR
  -- Electron spin resonance
- Problems?
  -- Bone is porous
  -- U uptake from soil?
Earlier sites?

- **New reports of old sites**
  - Art > 60,000 bp
  - Ochre > 78,000 bp
  - Artifacts > 120,000 bp

- **Are they legitimate?**

Old Sites?

- **Artifacts**
  - Grinding stone
  - Flaking debris
  - Ochre

- **Dates**
  - C-14
  - TL etc

Malakunanja rockshelter

- Shell midden
- charcoal
- sand
- Grindstones: in situ?
- sand
- C-14 dates: 6000 bp
- TL dates: 18,000 bp
- charcoal 18,000 bp
- 45,000 bp
- 100,000 bp
- 4.5 m sand
- 2 m charcoal
- 50 cm shell midden

Criteria:

- **Artifacts real?**
  - Informality of tools

- **Dates accurate?**
  - C-14 vs TL

- **Artifacts and dates related?**
  - Stratigraphic control

Human impact?

- **Extinction of megafauna**
  - Large marsupials gone by 10,000 bp

The world filling up after 50,000bp

- Extinction of megafauna
- Large marsupials gone by 10,000 bp
The First Americans

- **Changing Environments**
  - The Last Ice Age
  - Animal Extinctions
- **When did humans arrive?**
  - Paleo-Indian tradition
  - Earlier sites?

Laurentide Ice Sheet

- **Last Glacial**
  - Max = 18,000 bp
  - Retreats by 9000 bp

Ancient animal communities?

- **Fossil site: La Brea Tar Pits, CA**

Many species now extinct

- **Giant Sloth**

Extinct Fauna

- Camels
- Bison
- Horse

Extinct Sabertooth

- Smilodon
via Asia
- Bering Straits
  - Land-bridge
  - 30,000-10,000 bp

First Sites in North
- Siberia = 30,000-20,000 bp
  - Upper Paleolithic
- Alaska = 15,000 bp

Discoveries in 1920's
- Extinct fauna with artifacts

Mammoth
- Molar tooth

Paleoindian sites
- Clovis Culture
  - Fluted points
  - 11,500 bp

Overkill hypothesis
- Did Clovis hunters drive the large game animals extinct?
**Folsom bison hunters**
- Fluted points
  - Great Basin Sites

**Folsom Bison Kill Sites**
- Dune traps

**Folsom Bison Kill Sites**
- Arroyo traps

**Mass kills**
- Fall/winter hunts
  - Large groups

**Paleoindian campsites**
- Lindenmeier site
  - In your textbook!

**Paleoindian questions**
- Were they the first Americans?
- Was big game hunting typical?
- Did they drive the Pleistocene mammals extinct?
- Were they ancestors of modern Native Americans?