Notes 3/3
- Half-way through semester today!
- But, still only one-third through on points

Anasazi Recap
Chaco vs. Mesa Verde Farming
- MV farmed mesa tops
  - Valley bottoms too narrow
  - Reliance on summer rains
  - Vulnerable to extended drought
- Chaco farmed valley bottoms
  - Upland soils too sparse
  - Reliance on groundwater for irrigation
  - Vulnerable to arroyo cutting up valley.

Anasazi and Environment Summary
- People affect resources, affected by them
  - Large communities of rock and wood
    - May have used up wood
  - Divert, trap, save water
    - Arroyos, climate change
- Grow food
  - Still needed other food
- Finally had to move to new resources
- Applies to modern society.
Today's Topic:
Hohokam

• Piman word for "those who have gone"
• Who, where, and how?
  – Contrasts with Anasazi
• When
  – Dating issues?
• Why they left
• Where they went

http://carbon.cudenver.edu/stc-link/hohokam/Hohokam.htm

Emil W. Haury

• 1904 – 1992
• 1st UA Anth PhD
• Gap event
• Mammoth digs
• Studied all SW cultures
• Hohokam
  – "Red-on-Buff Culture"
• Head, Anthro.
• Dir., ASM
• Friend of LTRR

Hohokam
“Red-on-Buff Culture”

• Sonoran desert
• Near rivers
  – Salt and Gila R.
• Tucson examples
• Where from?
  – Mesoamerica
  – Local archaic descendents.
Sonoran Desert Environment

- Climate
- Vegetation
- Big difference:

Hohokam Material Culture

- Extensive Ceramic Decoration
- Human figures and animals
- Lots of Shell Working
- Bracelets and Pendants
- Ground Stone
- Manos and Metates, palettes, censers
- Specialized Crafting Tools
- Agave knives, spindle whorls
- Visit ASM!!!

http://www.statemuseum.arizona.edu/exhibits/pvia/index.shtml

http://www.ci.phoenix.az.us/PUEBLO/dfer-ceramic.html

www.hp.uab.edu/image_archive/up/upe.html
Hohokam Chronology

- Dated by: $^{14}$C, Archaeomagnetism, Ceramic seriation
  - Why not Tree-rings?
- 500 BC – AD 800
  - Small villages of ..............
  - Centered around ..............
  - Agriculture begins
  - ..................... canals start

http://www.pleione.com/pithouse/

Pithouses

Dug into ground
Frame Structure covered w/mud adobe
Sheltered side entrance
Occupied ...............(again, remember dating issues)
Most activities probably outside, under ramadas
Visit Pueblo Grande—Phoenix
http://phoenix.gov/PUEBLO/exhouses.html

Preservation

- Mesquite, cottonwood, Saguaro ribs (tree-rings??)
- Indentations in ground
- Burning helps
Hohokam Chronology
• AD 800 – 1150
  – Larger communities
  – Ballcourts
  – Massive Irrigation works

Ballcourts
• 200 found, built from
  • ~100 ft long
  • Connection to ...........
  • Romero Ruin @ Catalina State Park.

Hohokam Chronology
• AD 1150 – 1300
  – ..................replace ballcourts
• Post-AD 1300
  – Big houses built
  – Cultural collapse by AD 1450 (but remember dating issues)
Hohokam Platform Mounds
• Low rectangular platforms, with walls
• Filled with trash, capped with ………………..
• Associated with ……………………………

Platform Mound sites

Ballcourt sites

Big Houses
• Casa Grande
  – Fr. Kino
• 4 stories
• Adobe walls
• Storage
• Astronomical?
• GO Visit!!!
Harvesting the Desert

- Trash piles instructive
- Plants
  - ...........................................
  - ...........................................
  - ...........................................
- Animals:
  - .......................
  - ...................
  - ...............• hunted in fields
  - ...............• caught in canals.

Farming the Desert

- Hohokam unsurpassed farmers
- Canal irrigation
  - Hundreds of miles
  - ...........................................
  - ...........................................
  - ...........................................
  - digging tools.

http://www.foodmuseum.com/fhsHohokamCanals.html

- Canals well engineered
  - If too steep:
  - ...........................................
  - If too shallow:
  - ...........................................
- Pueblo Grande: 10,000 acres (15 sq.mi.)
- Flat streams
- No entrenchment.
Farming the Desert

- Floodwater farming
  - Perennial stream that floods, Santa Cruz
    - .................................. soil
    - .................................. crop

- Dry farming
  - Direct, divert rainfall sort distances to crops
    - .....................
    - .....................
    - .....................
    - .....................

Environmental Zonation

- Alluvial fans:
  - Variety of microsite conditions

Zone 5

- .....................
- High water table
- .....................
- Dense populations
Zone 2
Less predictable water
• roast areas, up to 35 m diam.
• Many tools

Zone 4
• Mountain pediment
• water table
• farming
• to divert water

Hohokam Abandonment
Climate: Droughts & Floods
• Pro:
  – damaged irrigation system
• Con:
  – Had survived
Salt River Stream Flow
• Changes in variation
• Big flow

Hohokam Abandonment
Overpopulation
• Pro:
  – ..................... increases after 1300
  • .........................in Sonoran desert
    – Malnutrition evident in bones
    – Just too many people?
• Con:
  – ..........was still productive
  – Social limitations.

Hohokam Abandonment
Soil Salinization
Excessive salt in soil:
• Irrigation water
  – Fresh: 0.5 ppt
  – Ground: 0.7 ppt
  – CAP: 0.7 ppt
  – Ocean: 35 ppt
• Arid environment.
Hohokam Abandonment

Soil Salinization
- Ruins soil for farming:
  - Plants
- Takes
- Fertile Crescent still dead
- Requires drainage:
  - Must

Hohokam Abandonment

Soil Salinization
- Pro:
  - ..................due to irrigation
  - Salt River is aptly named
- Con:
  - Salinization takes only 50 years today
  - .................. for ~1000 yrs.
  - ..................
  - ..................
  - Not much evidence

Where Did They Go?
- Reverted groups
- Still in, but not on
- Pimas and Tohono O’Odham claim to be descendents of Hohokam
- Hohokam probably had a better quality of life than Pima and Tohono O’Odham at time of Spanish contact
See Hohokam In Tucson
• Ft. Lowell Park
  – E. Glenn St.
  – N. Craycroft
• Go to ne corner
• Pithouse outline
• Lots of interp.