

Africa: Kingdom of Kush and Civilization of the Bow

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I. Africa: The Cradle of Humankind

II. Civilizations of Black Africa before A.D. 200

III. Three Sub-Saharan Cultures

I. Africa: The Cradle of Humankind

A. Pastoralism (avoiding the tse-tse fly)

1. Sahara (7000 B.C.–3000 B.C.)
2. East Africa (5000 B.C.–)

B. Metal Working

1. copper and bronze (from 4000 B.C.)
2. iron (from 670 B.C.)

C. Iron Age Kingdom of Meroe

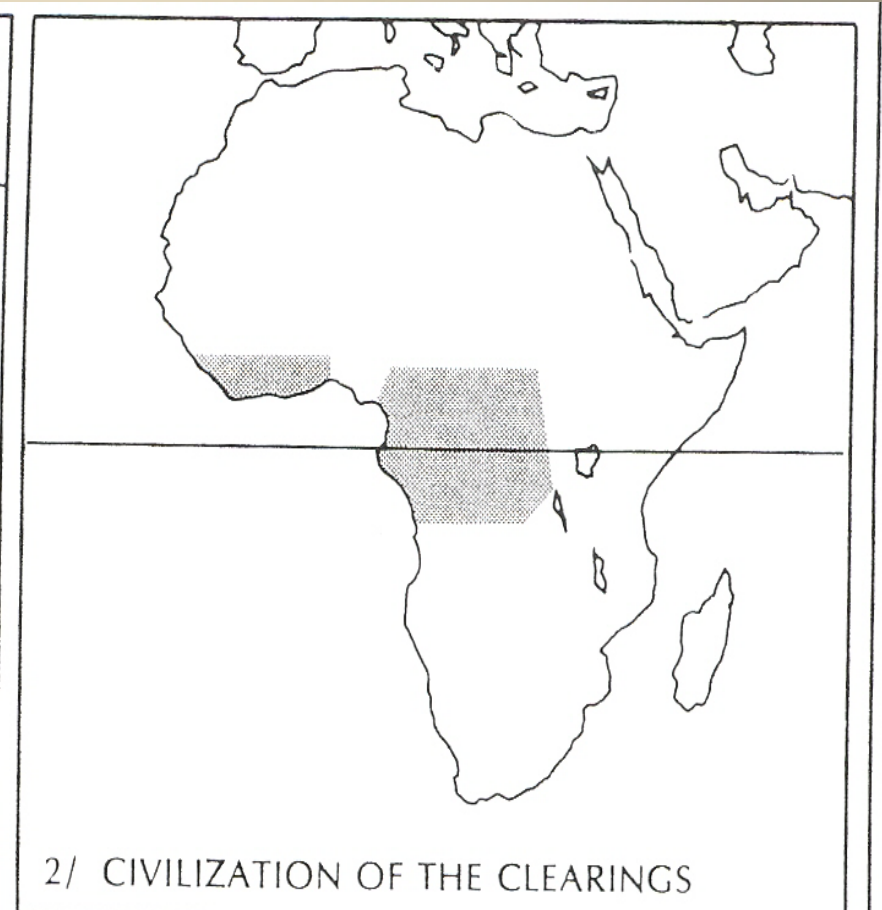
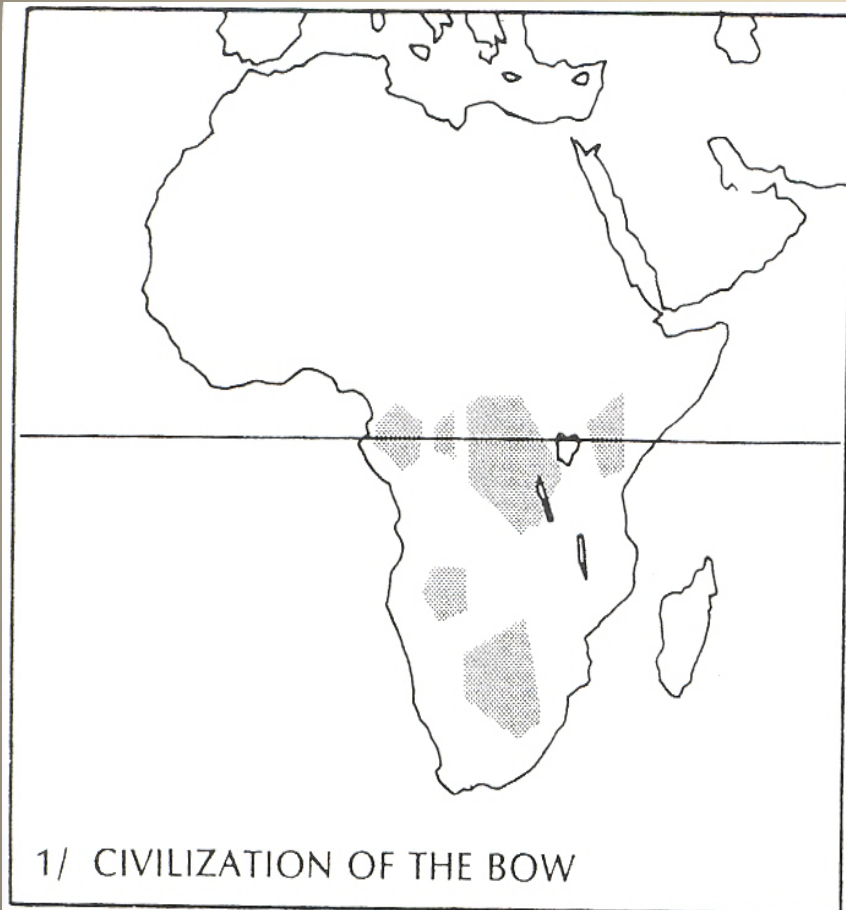
(1500 B.C.– A.D. 350)

II. Civilizations of Black Africa before 200 A.D.

A. Civilization of the Bow

1. hunter-gatherers
2. Bushmen, Pygmies, Mbuti
3. first use of fire — 50,000 to 60,000 years ago
4. Middle and Later Stone Age culture — 10,000 to 33,000 years ago
5. bow range = < 50 yards

Bow and Clearings Civilizations



II. Civilizations of Black Africa before 200 A.D. (cont.)

B. Civilization of the Clearings

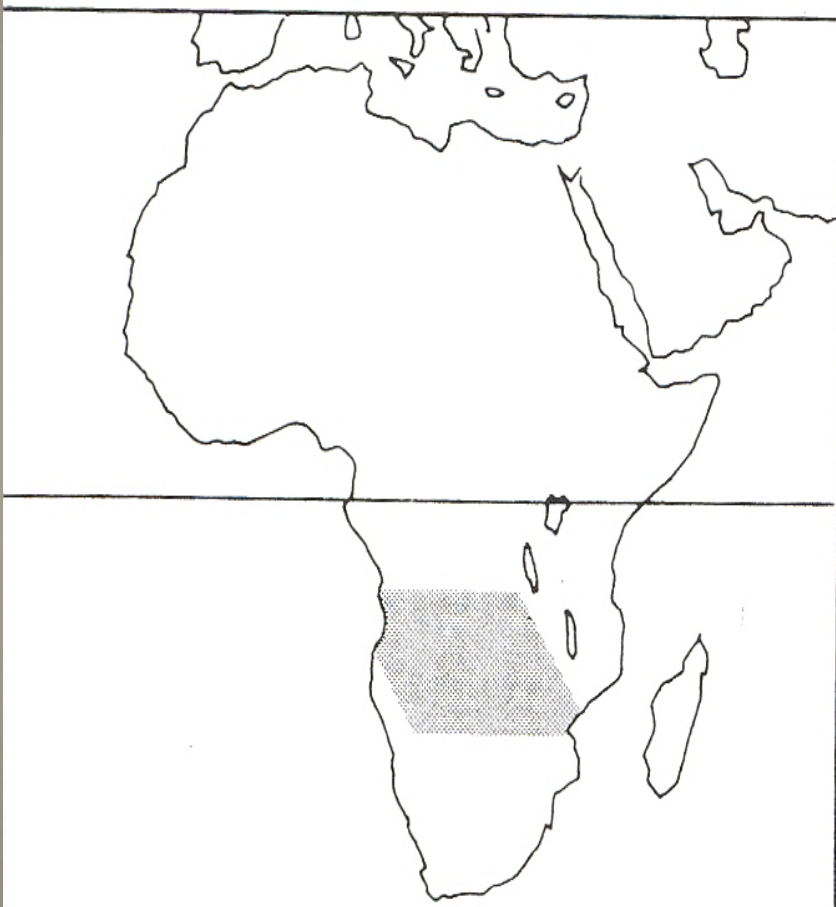
1. slash-and-burn agriculture / chop down trees and burn them
2. Ubangi, Niger Delta, rain forest zone
3. introduction of iron / importance of blacksmiths
4. poor soil /land leached by rain / root crops
5. diseases: malaria, trypanosomiasis, filariasis, ankylostomiasis

II. Civilizations of Black Africa before 200 A.D. (cont.)

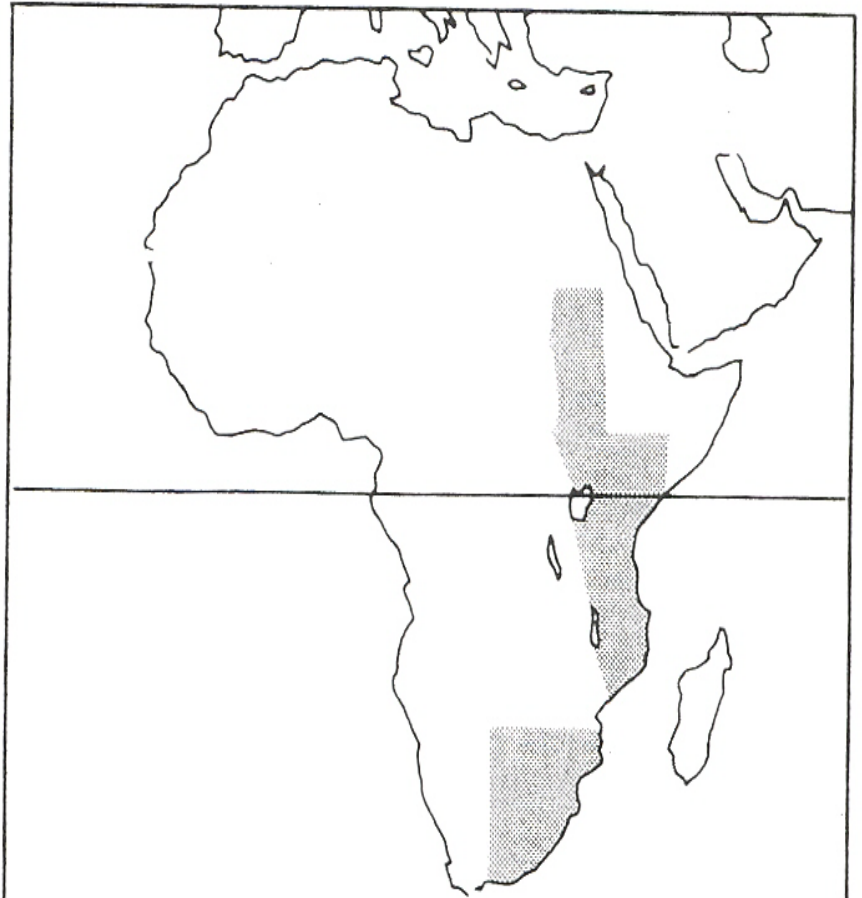
C. Civilization of the Granaries

1. slash-and-burn agriculture / use branches from surrounding trees
2. dry forest / wooded savanna / grassy savanna
3. long fallowing / rotation of crops / hoe — no plow
4. crossed line from subsistence to surplus / cereals and legumes
5. diseases of undernourishment

Granaries and Spear Civilizations



3/ CIVILIZATION OF THE GRANARIES



4/ CIVILIZATION OF THE SPEAR

III. Three Sub-Saharan Cultures

- A. From Basil Davidson, *Mastering a Continent*, “Africa”, program 2
 - 1. Bakat (northern Kenya) – cattle herding
 - 2. Surko (northern Nigeria) – iron making
 - 3. Dogo (Mali) – religious ceremonies

Core Cultures of the Pacific Rim: Japan and the Western Hemisphere

I. Archaeological Dating Techniques

II. Origins of the Japanese Culture

III. The Populating of Turtle Island

I. Archaeological Dating Techniques

- A. Relative (= relatively inaccurate)
- B. Absolute (= absolutely inaccurate)
- C. Written Texts

A. Relative (= relatively inaccurate)

1. Stratigraphy

- a. can be done in the field
- b. based on principle that each era produces its own unique trash
- c. assumes that the deeper the trash the earlier the date
- d. problem of contamination between layers

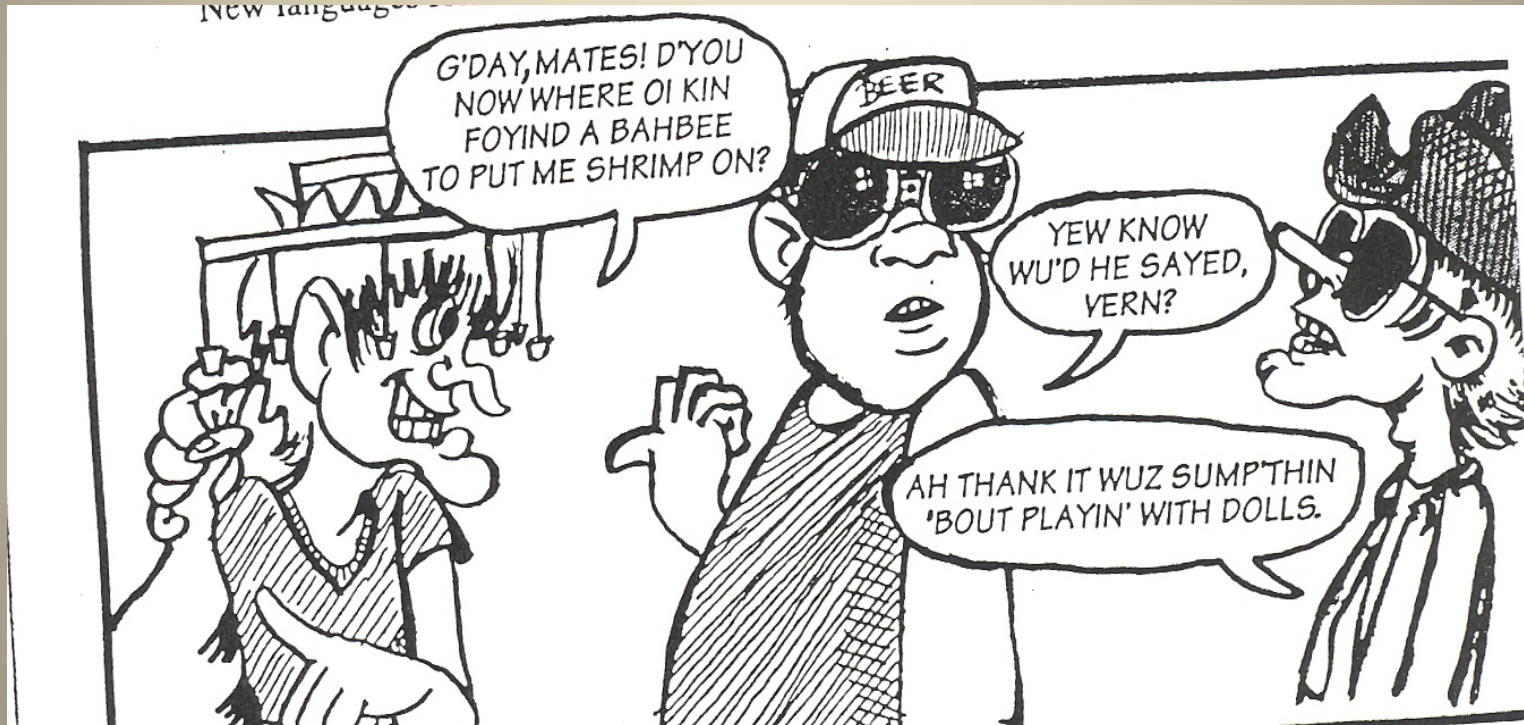
A. Relative (= relatively inaccurate)

2. Historical Linguistics

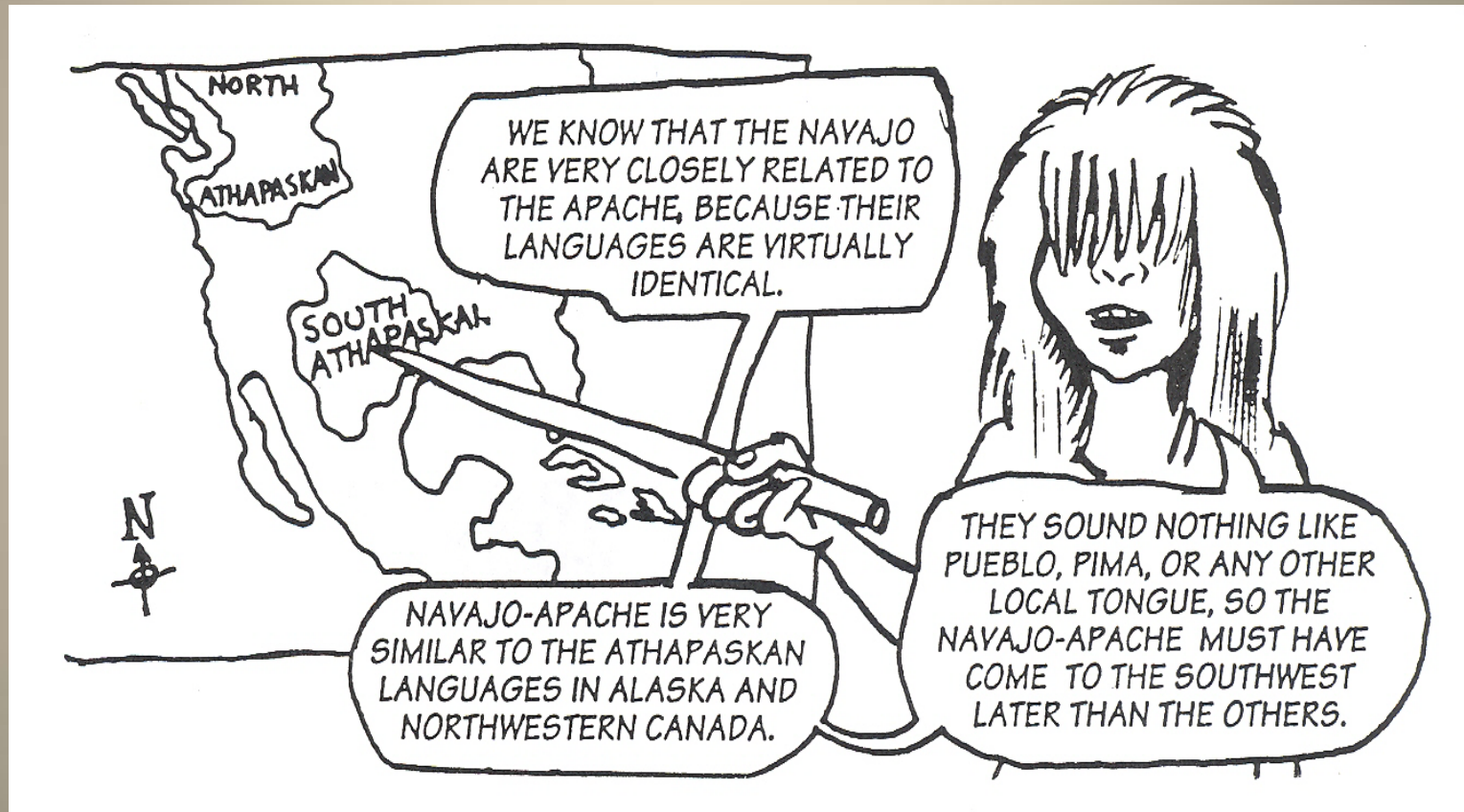
- a. attempts to construct history of each language and dialectic
- b. example in SW United States:

- (1) similarity of Navajo language with Apache language
- (2) called South Athapaskan
- (3) similarity of South Athapaskan with languages in Alaska and NW Canada (called North Athapaskan)
- (4) no similarity of South Athapaskan with Pueblo, Pima, or other languages of SW
- (5) therefore, Navajo-Apache came to SW later than others

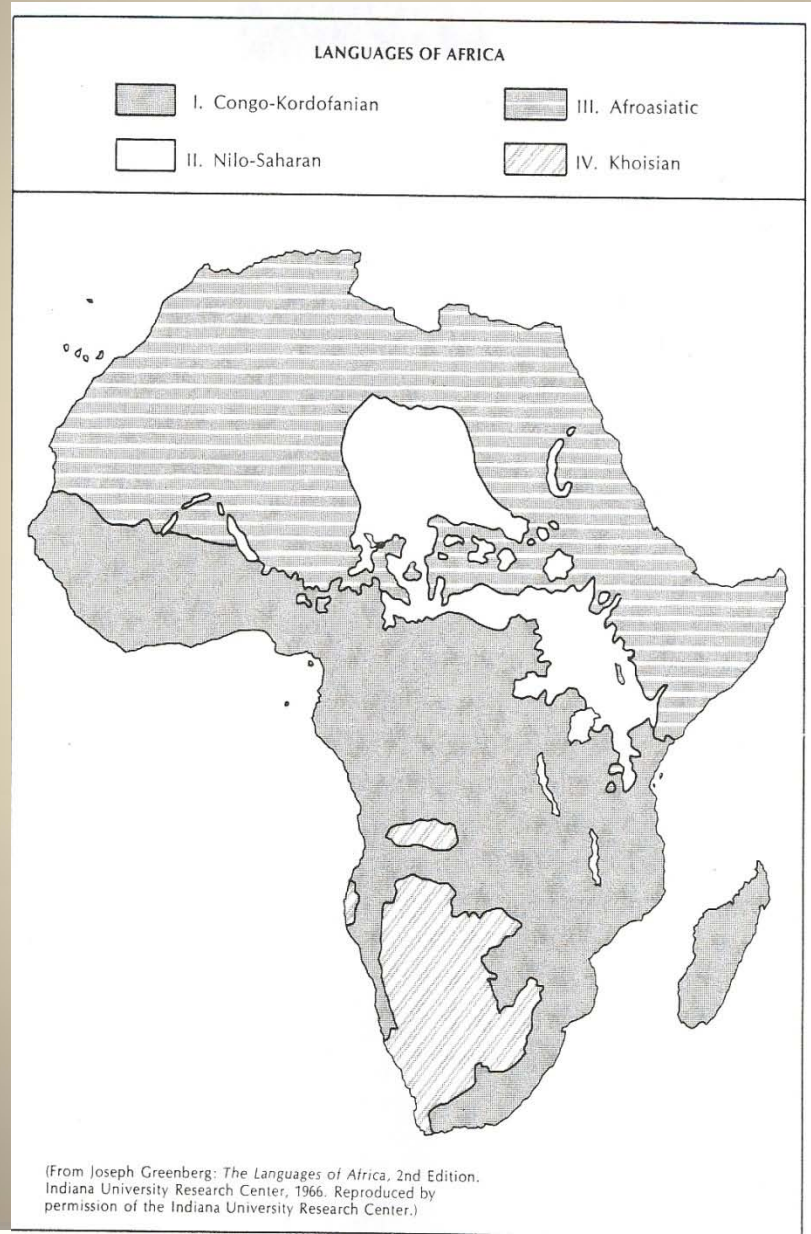
Historical Linguistics



Historical Linguistics



Languages of Africa



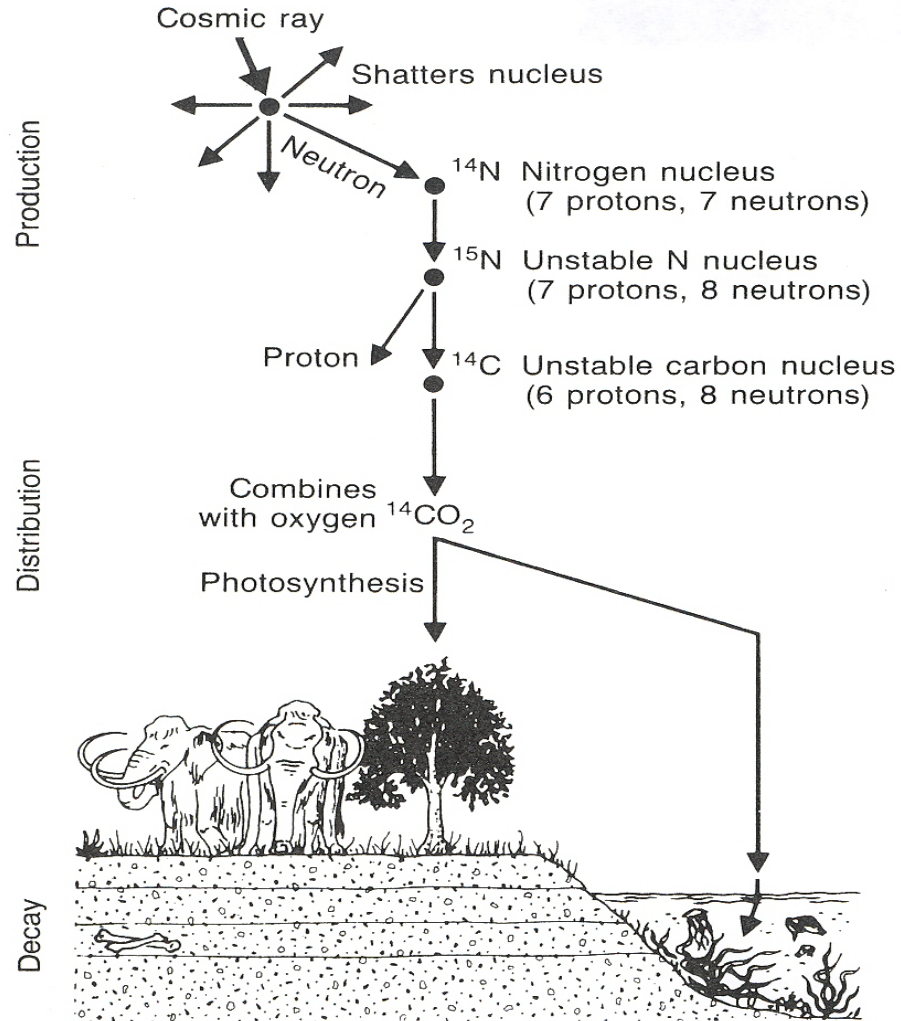
B. Absolute (= absolutely inaccurate)

1. Radiocarbon—dates organic matter
2. Thermoluminescence—dates pottery, glass, etc.
3. Other Techniques

1. Radiocarbon—dates organic matter

- a. invented by Willard Libby in 1949
- b. once an organism is dead, no C-14 can enter or leave it
- c. C-14 has a half-life of 5,730 years

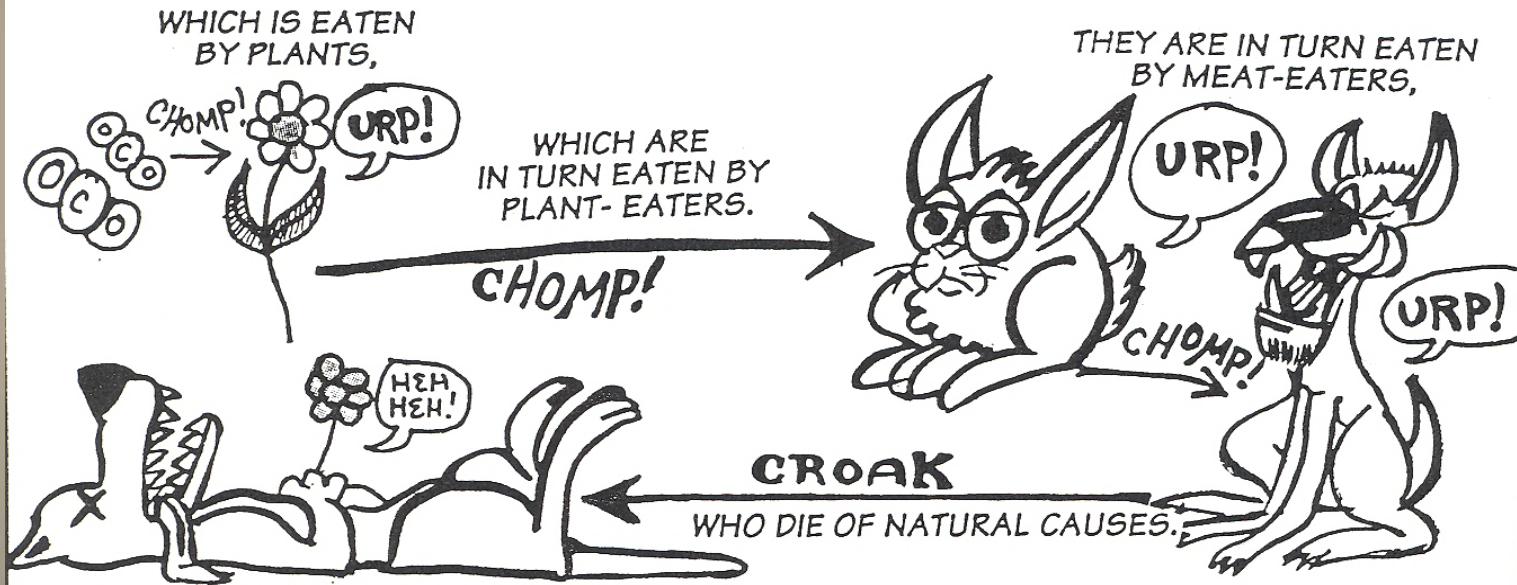
Radiocarbon Dating



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Radiocarbon Dating

RADIOCARBON DATING IS BASED ON THE PRINCIPLE THAT RADIOACTIVE (UNSTABLE) ELEMENTS DECAY INTO OTHER ELEMENTS AT A PREDICTABLE RATE. CARBON-14, CREATED BY COSMIC RAYS IN THE UPPER ATMOSPHERE, IS ALWAYS PRESENT IN THE AIR IN VERY TINY BUT CONSTANT AMOUNTS AS THE "C" IN CO_2 ,

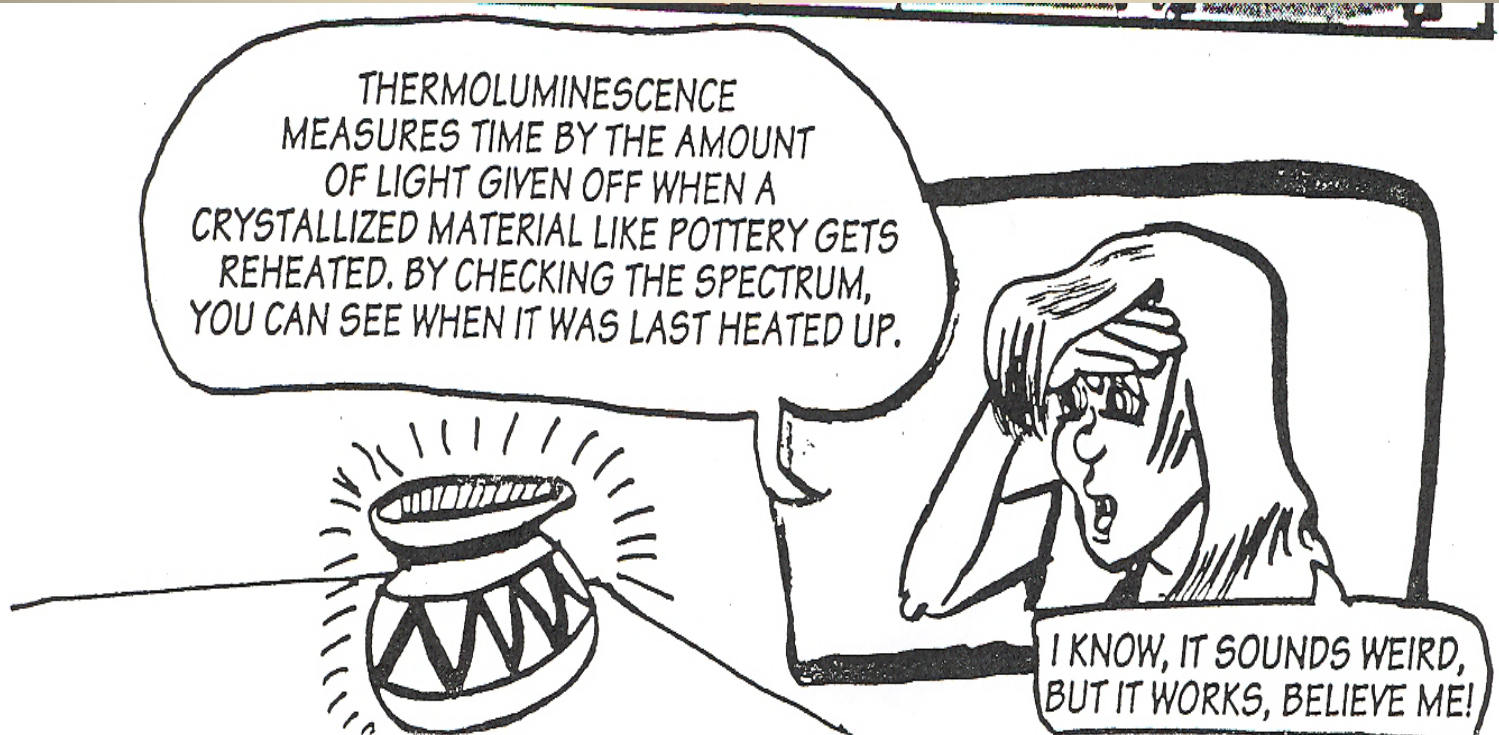


ONCE DEAD, NO C-14 CAN ENTER OR LEAVE THE ORGANISM. THE C-14 BEGINS TO DECAY. HALF OF IT WILL HAVE DECAYED IN 55,000 YEARS. BY MEASURING THE AMOUNT DECAYED, WE CAN TELL HOW OLD THE SAMPLE IS.

2. Thermoluminescence—dates pottery, glass, etc.

- a. used for dating crystallized material like pottery
- b. measures time by amount of light given off when reheated
- c. can date material up to 35,000 years old

Thermoluminescence Dating



THERMOLUMINESCENCE
MEASURES TIME BY THE AMOUNT
OF LIGHT GIVEN OFF WHEN A
CRYSTALLIZED MATERIAL LIKE POTTERY GETS
REHEATED. BY CHECKING THE SPECTRUM,
YOU CAN SEE WHEN IT WAS LAST HEATED UP.

I KNOW, IT SOUNDS WEIRD,
BUT IT WORKS, BELIEVE ME!

3. Other Techniques

a. potassium-argon dating

b. uranium disequilibrium

c. fission tracks

C. Written Texts

II. Origins of the Japanese Culture

A. Earliest Absolute Dates

1. February 11, 660 B.C.—traditional date for beginning of Japan
2. A.D. 57—first mention of Japan in Chinese histories

II. Origins of the Japanese Culture

B. Archaeological Periods

1. Jōmon (rope pattern), 8000–300 B.C.
2. Yayoi, 300 B.C.–A.D. 300

III. The Populating of Turtle Island

A. Stages and Cultures of Settlement in North America

B. Cultures of Ancient Mesoamerica

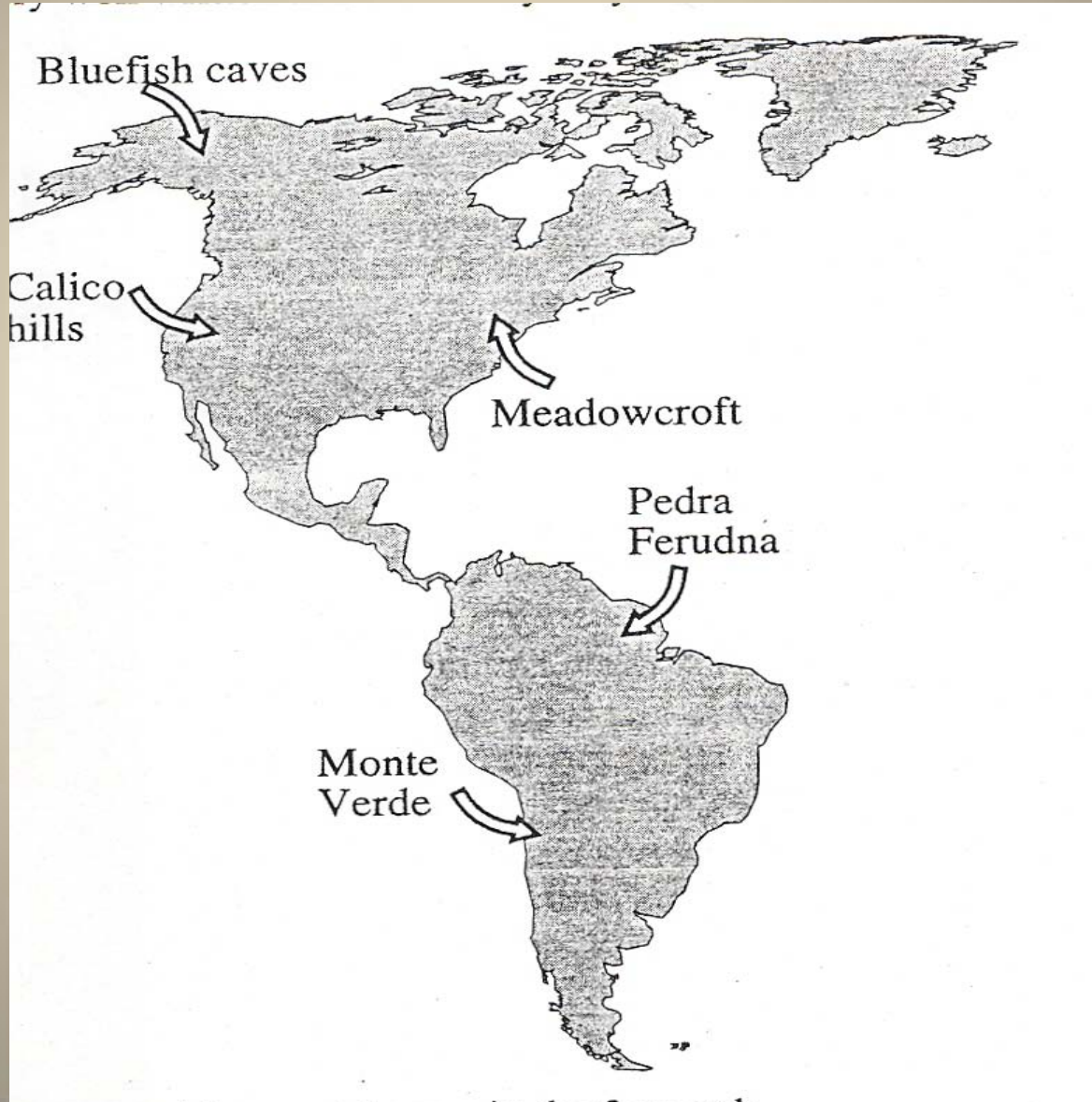
C. Andes Mountains

A. Stages and Cultures of Settlement in North America

1. Earliest Sites

- a. Sandia—named after Sandia (“Watermelon”) Mountains near Albuquerque (discovered in 1936)
- b. Meadowcroft—site in western Pennsylvania (occupied as early as 16,000 to 22,000 years ago)

Claims of Early Amerindian Settlements

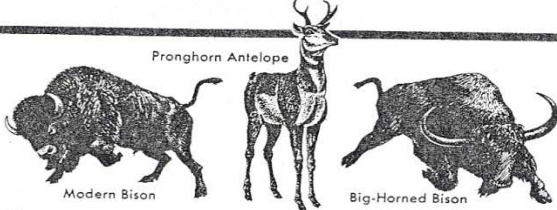

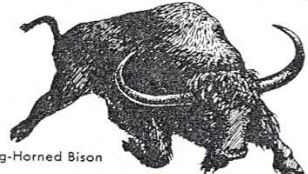

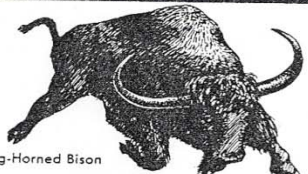

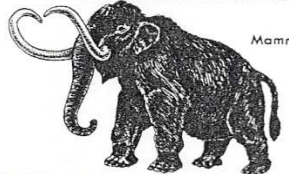

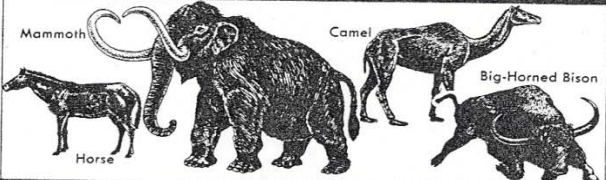

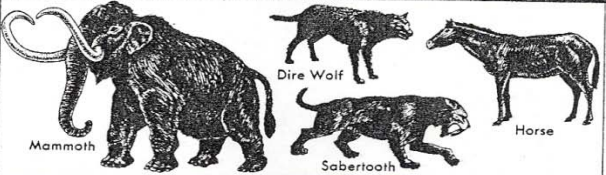



A. Stages and Cultures of Settlement in North America (cont.)

2. Great Plains Culture

- a. Clovis (Llano)—first discovered near Clovis NM
- b. Folsom—first discovered in Folsom NM
- c. Plainview—remains of 1000 big-horned bison near Plainview TX
- d. Plano—Yuma County CO and Eden Valley WY

Primary Game Hunted

STAGES AND CULTURES	APPROX. DATES	PRIMARY GAME HUNTED	PROJECTILE POINTS
PLANO	9,500 TO 7,000 YEARS AGO	 <p>Pronghorn Antelope Modern Bison Big-Horned Bison</p>	
PLAINVIEW	10,000 TO 7,500 YEARS AGO	 <p>Big-Horned Bison</p>	
FOLSOM	11,000 TO 9,000 YEARS AGO	 <p>Big-Horned Bison</p>	
LLANO	15,000 (?) TO 11,000 YEARS AGO	 <p>Mammoth</p>	
SANDIA	25,000 (?) TO 12,000 YEARS AGO	 <p>Mammoth Camel Horse Big-Horned Bison</p>	
PRE-PROJECTILE STAGES	40,000 (?) TO 20,000 (?) YEARS AGO	 <p>Mammoth Dire Wolf Sabertooth Horse</p>	<p>No Undisputed Projectile Points</p>  <p>SCRAPERS</p>

A. Stages and Cultures of Settlement in North America (cont.)

3. Desert Culture (Danger Cave, UT)—9500 B.P.
 - a. oriented toward plants as primary food source
 - b. characterized by baskets for transporting and storing grain
 - c. cave dwellers in Arizona, Nevada, Oregon, and Utah

A. Stages and Cultures of Settlement in North America (cont.)

4. Eastern Archaic—more than 10,000 sites
 - a. trade networks (bordered by Florida, Lake Superior, New England)
 - b. Modoc (IL) Rock Shelter (9000 B.P.)—oldest site
 - c. oriented toward small animals as primary food source, including deer, elk, raccoon, opossum, fish, turtles, snails, mussels, ducks, geese

A. Stages and Cultures of Settlement in North America (cont.)

d. “primary forest efficiency”

- 275 species of plants used for medicine
- 130 species of plants used for food
- 31 species of plants used as magical charms
- 27 species of plants used for smoking
- 25 species of plants used as dyes
- 18 species of plants used in beverages
- 52 species of plants used for miscellaneous purposes

e. Adena Culture—mound builders

B. Cultures of Ancient Mesoamerica

1. Zapotec (Formative Oaxaca) (2300–600 B.C.)
2. Olmec (1200–400 B.C.)—contact with Africa?
 - a. irrigated agriculture
 - b. towns—handicraft industries
 - c. elaborate religion
 - d. calendar
 - e. written language
3. Preclassic Maya (2300 B.C.–A.D. 300)

C. Andes Mountains

1. Chincharro (ca. 5000 B.C.)—mummies before those in Egypt
2. Chavin (850–250 B.C.)—contact with Japanese?
3. Nazca (100 A.D.–800 A.D.)