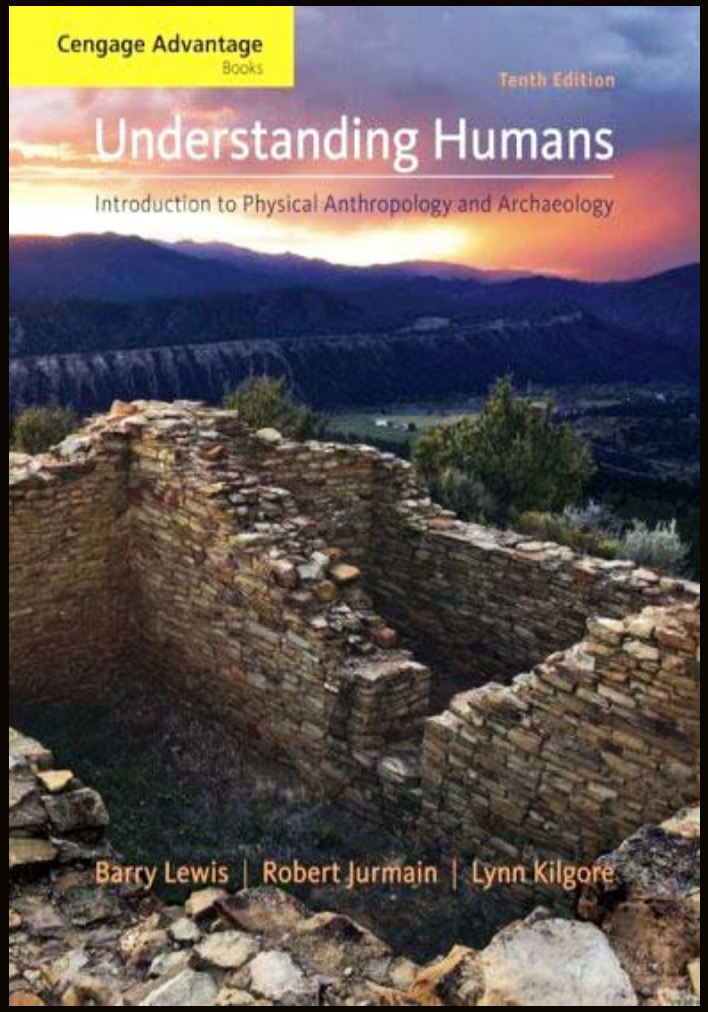

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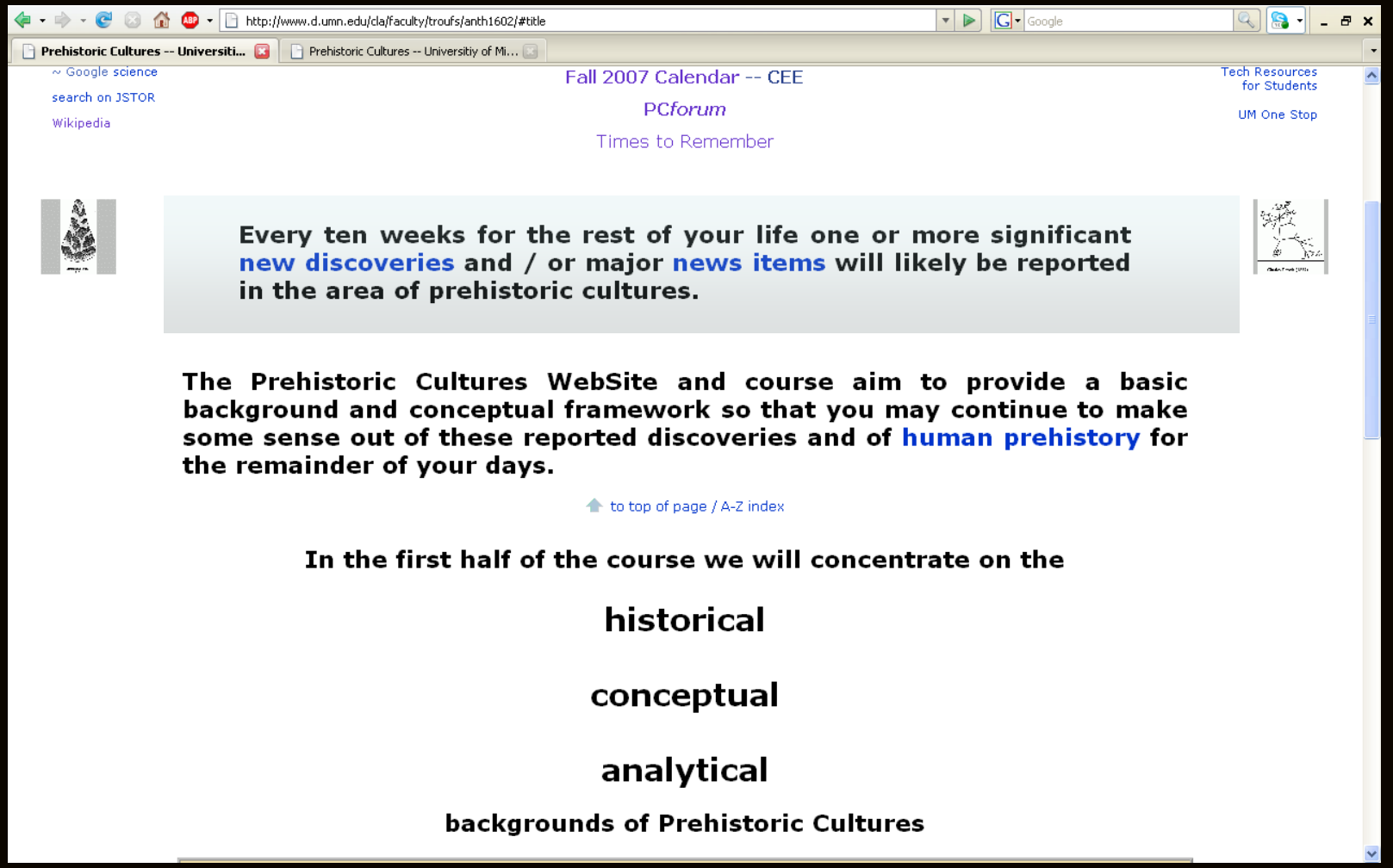

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- **Recommendations on Studying for this Course**
  - Handout: **"Times to Rembmber"**
  - **How to Study for Quizzes and Exams**

    (slides 03B -- these are always availble for review on-line at </cla/faculty/troufs/anth1602/PowerPoint
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    - " The Curve "
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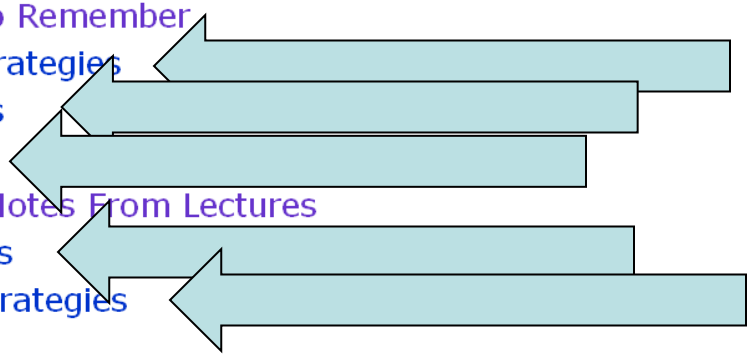

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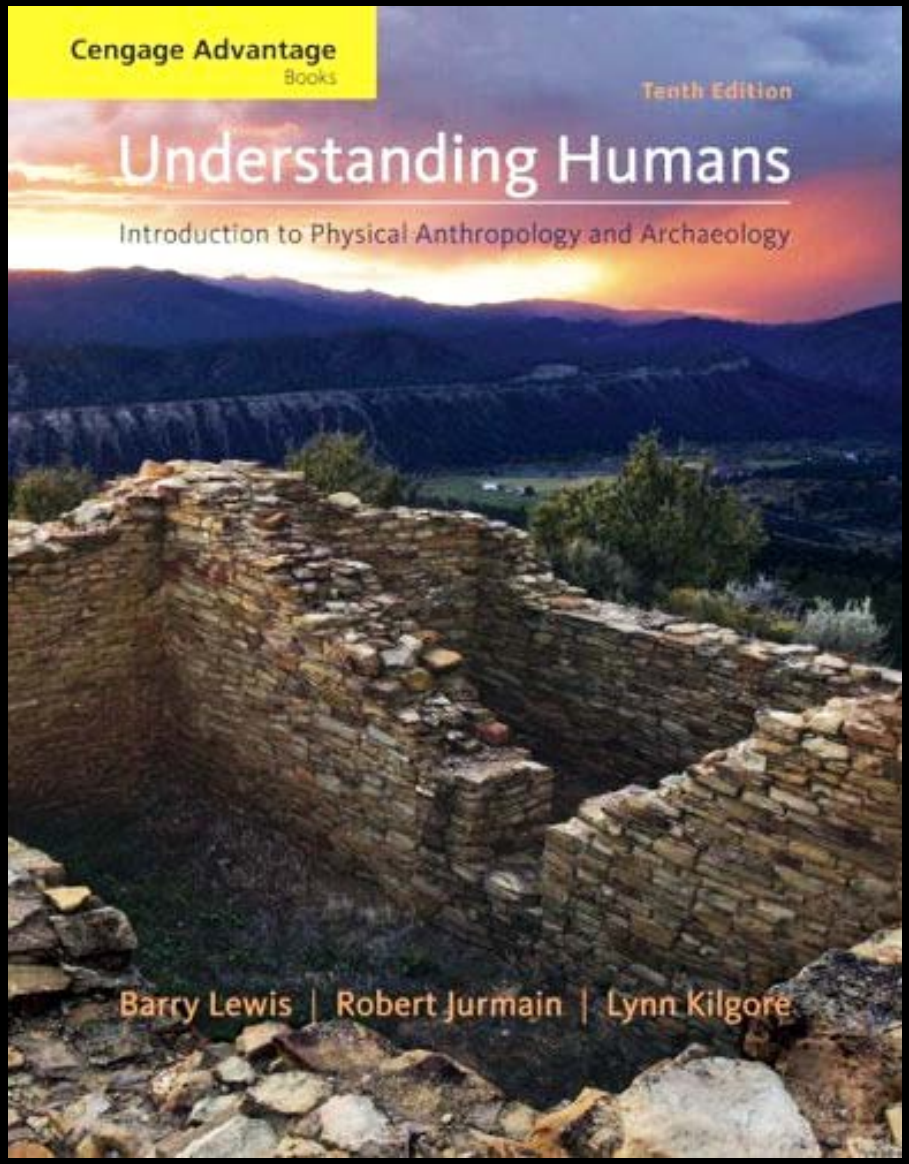

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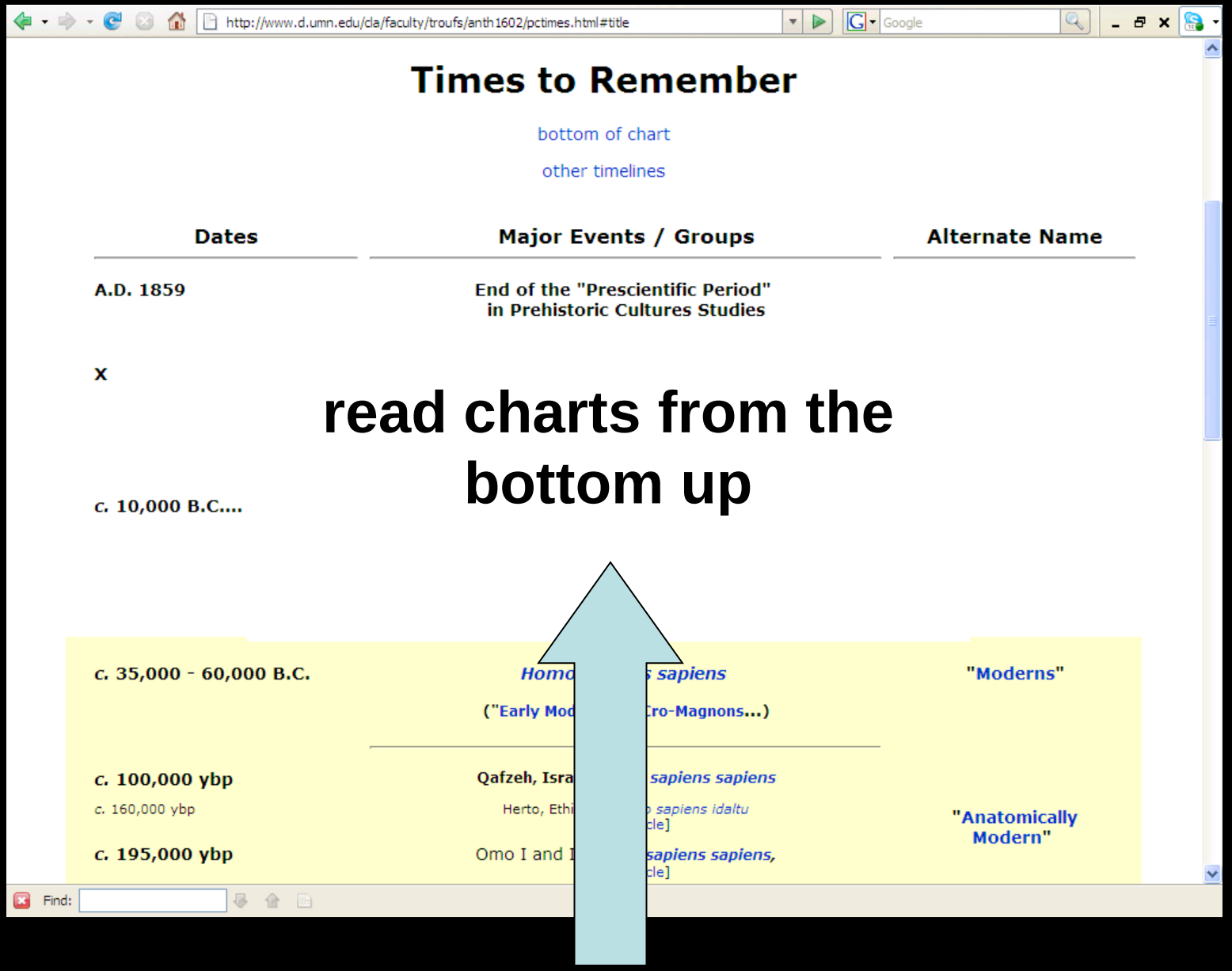

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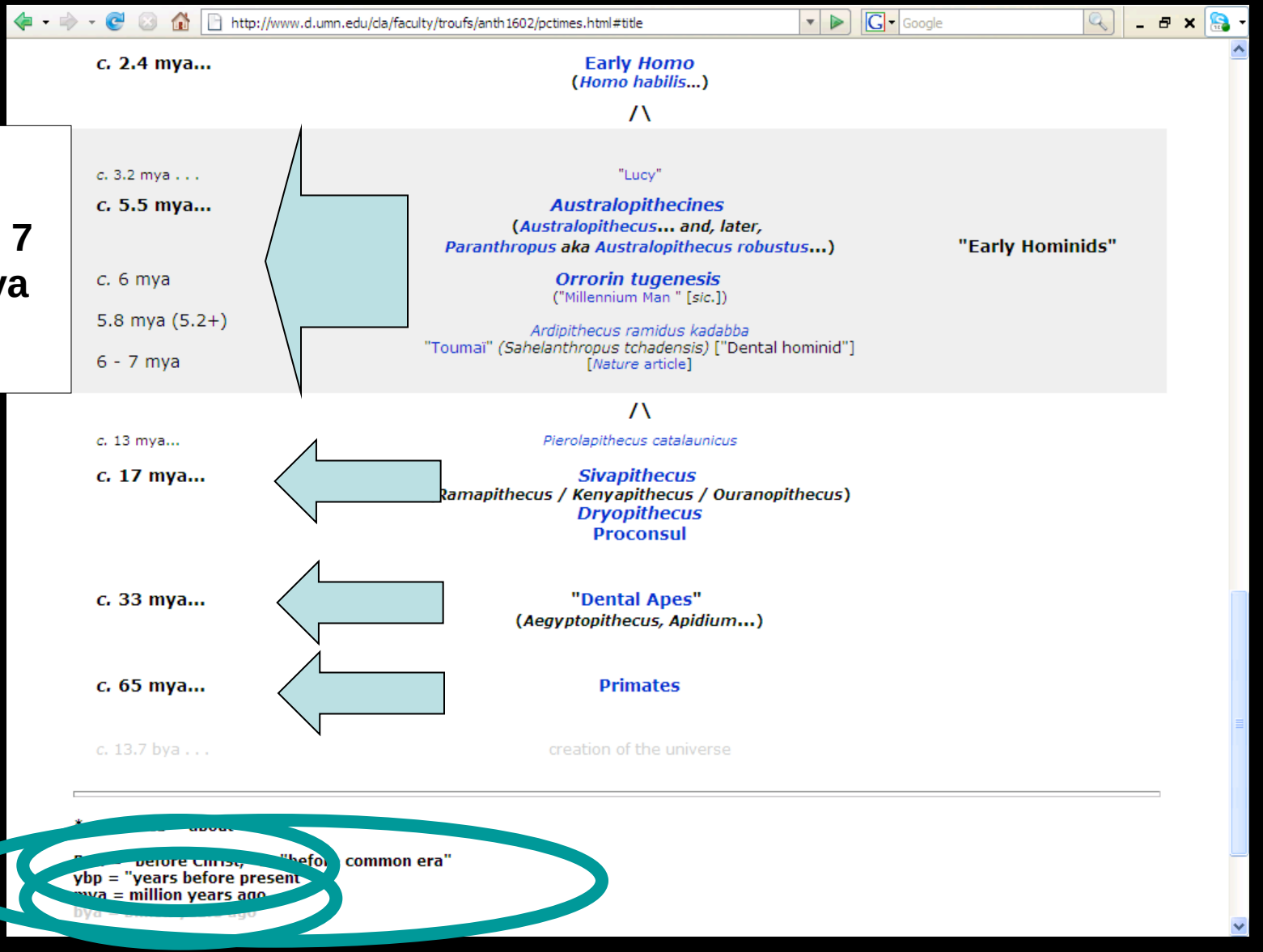

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2. The last of things
3. The best of things

REPEAT

keep track of

1. The first of things
2. The last of things
3. The best of things

pay attention
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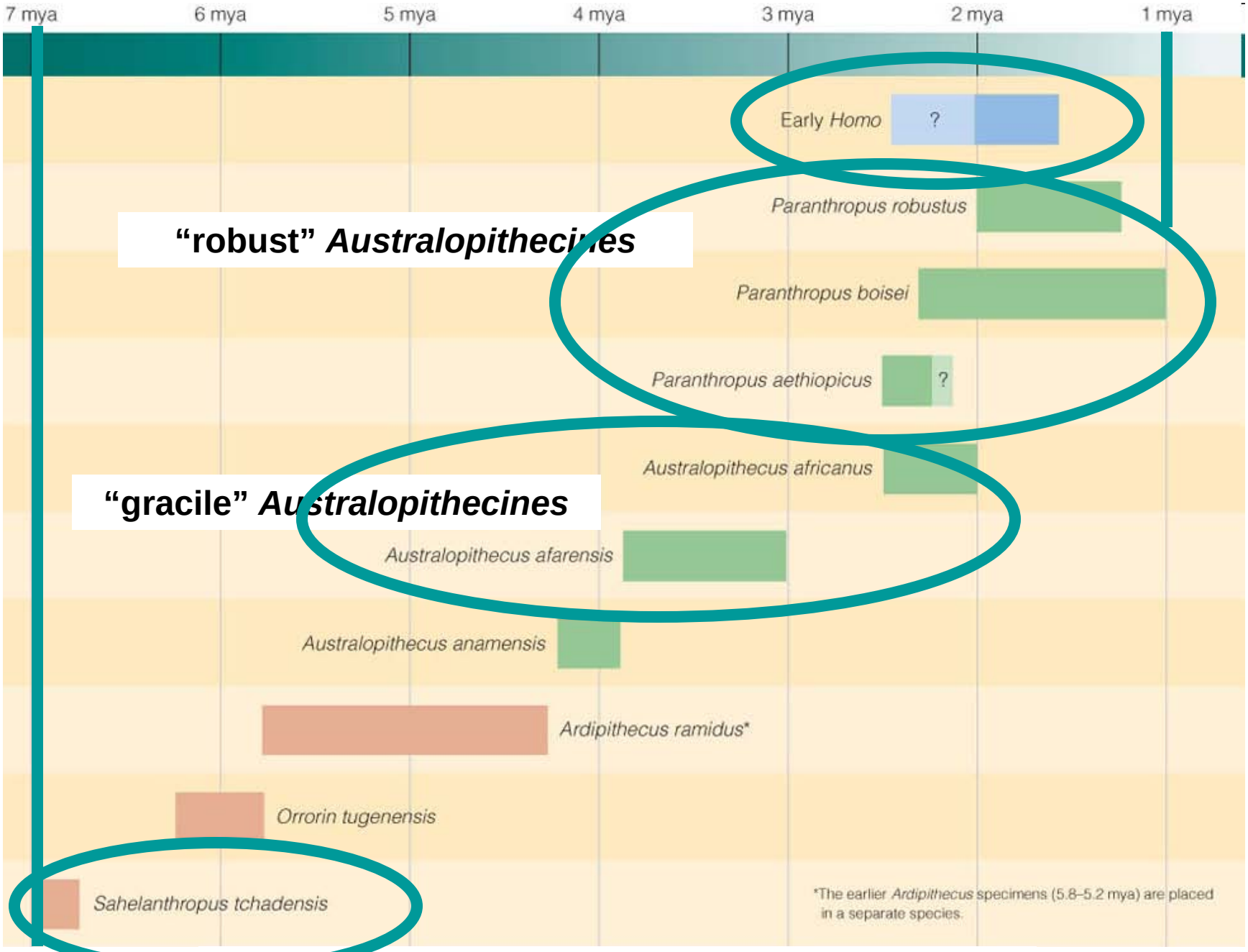


p. 224 Time line of early African hominins

p. 250 Time line for *Homo erectus* and contemporaries

What's Important Key Fossil Discoveries of *Homo Erectus*

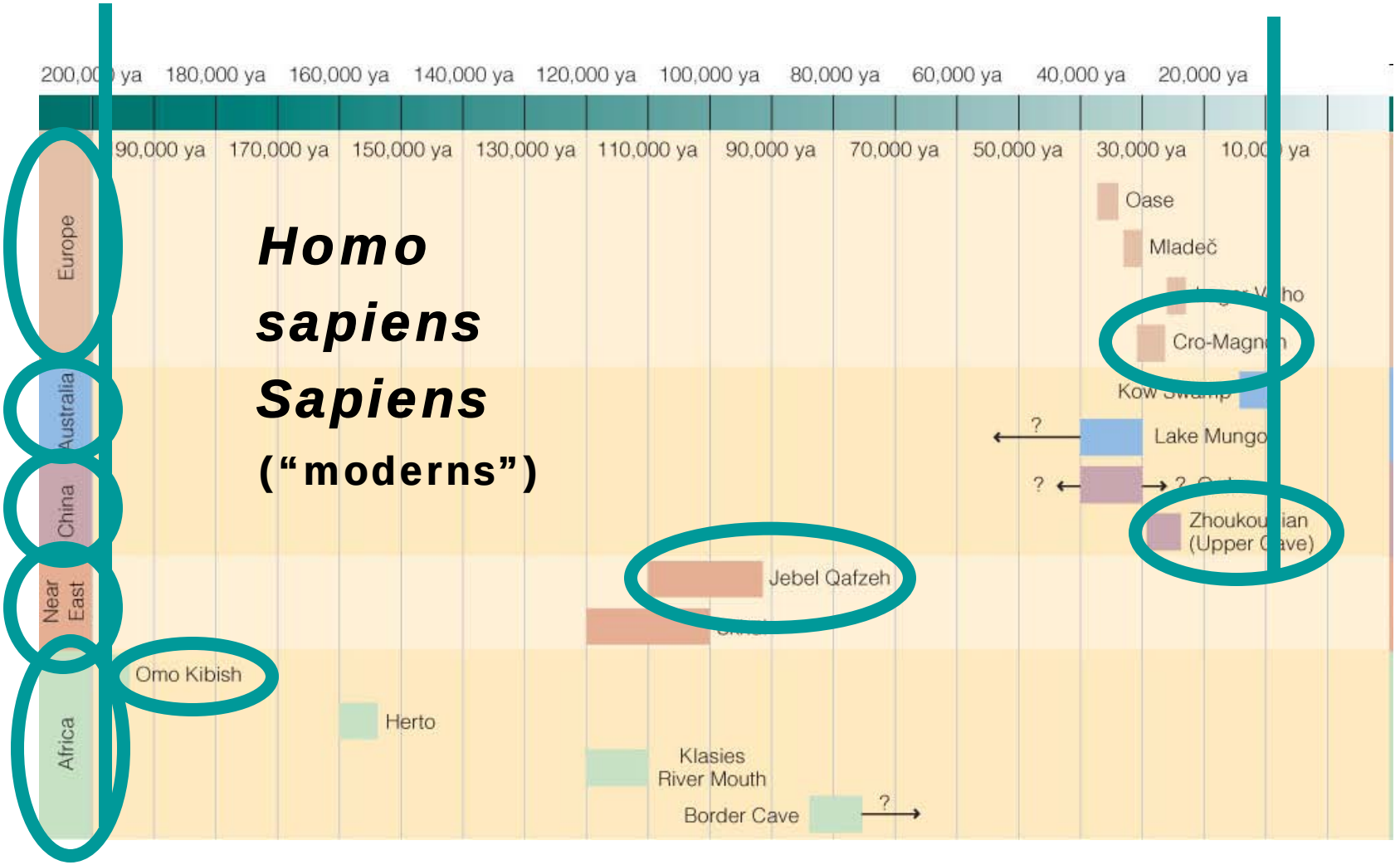
Dates	Region	Site	The Big Picture
1.6 mya–25,000 ya	Asia (Indonesia)	Java (Sangiran and other sites)	Shows *H. erectus* early on (by 1.6 mya) in tropical areas of Southeast Asia; *H. erectus* persisted here for more than 1 million years
600,000–400,000 ya	China	Zhoukoudian	Largest, most famous sample of *H. erectus*; shows adaptation to colder environments; conclusions regarding behavior at this site have been exaggerated and are now questioned
900,000–800,000 ya	Europe (Italy)	Ceprano	Likely best evidence of full-blown *H. erectus* morphology in Europe
1.8–1.7 mya	(Republic of Georgia)	Dmanisi	Very early dispersal to southeastern Europe (by 1.8 mya) of small-bodied, small-brained H. erectus population; may represent an earlier dispersal from Africa than one that led to wider occupation of Eurasia
1.6 mya	Africa (Kenya)	Nariokotome	Beautifully preserved nearly complete skeleton; best postcranial evidence of *H. erectus* from anywhere
1.8 mya		East Turkana	Earliest *H. erectus* from Africa; some individuals more robust, others smaller and more gracile; variation suggested to represent sexual dimorphism

p. 254 Key Fossil Discoveries of *Homo erectus*

What's Important Key Fossil Discoveries of Premodern Humans

Dates	Region	Site	Hominin	The Big Picture
50,000 ya	Western Europe	La Chapelle (France)	Neandertal	Most famous Neandertal discovery; led to false interpretation of primitive, bent-over creature
110,000 ya	Southwestern Asia	Tabun (Israel)	Neandertal	Best evidence of early Neandertal morphology in S. W. Asia
130,000 ya	South Africa	Kabwe (Broken Hill, Zambia)	*H. heidelbergensis*	Transitional-looking fossil; perhaps a close ancestor of early *H. sapiens* in Africa
600,000–530,000 ya	Western Europe	Atapuerca (Sima de los Huesos)	*H. heidelbergensis* (early Neandertal)	Very early evidence of Neandertal ancestry; suggests Neandertals likely are a different species from *H. sapiens*
600,000 ya	East Africa	Bodo (Ethiopia)	*H. heidelbergensis*	Earliest evidencce of *H. heidelbergensis* in Africa—and possibly ancestral to later *H. sapiens*

p. 282 Key Fossil Discoveries of Premodern Humans

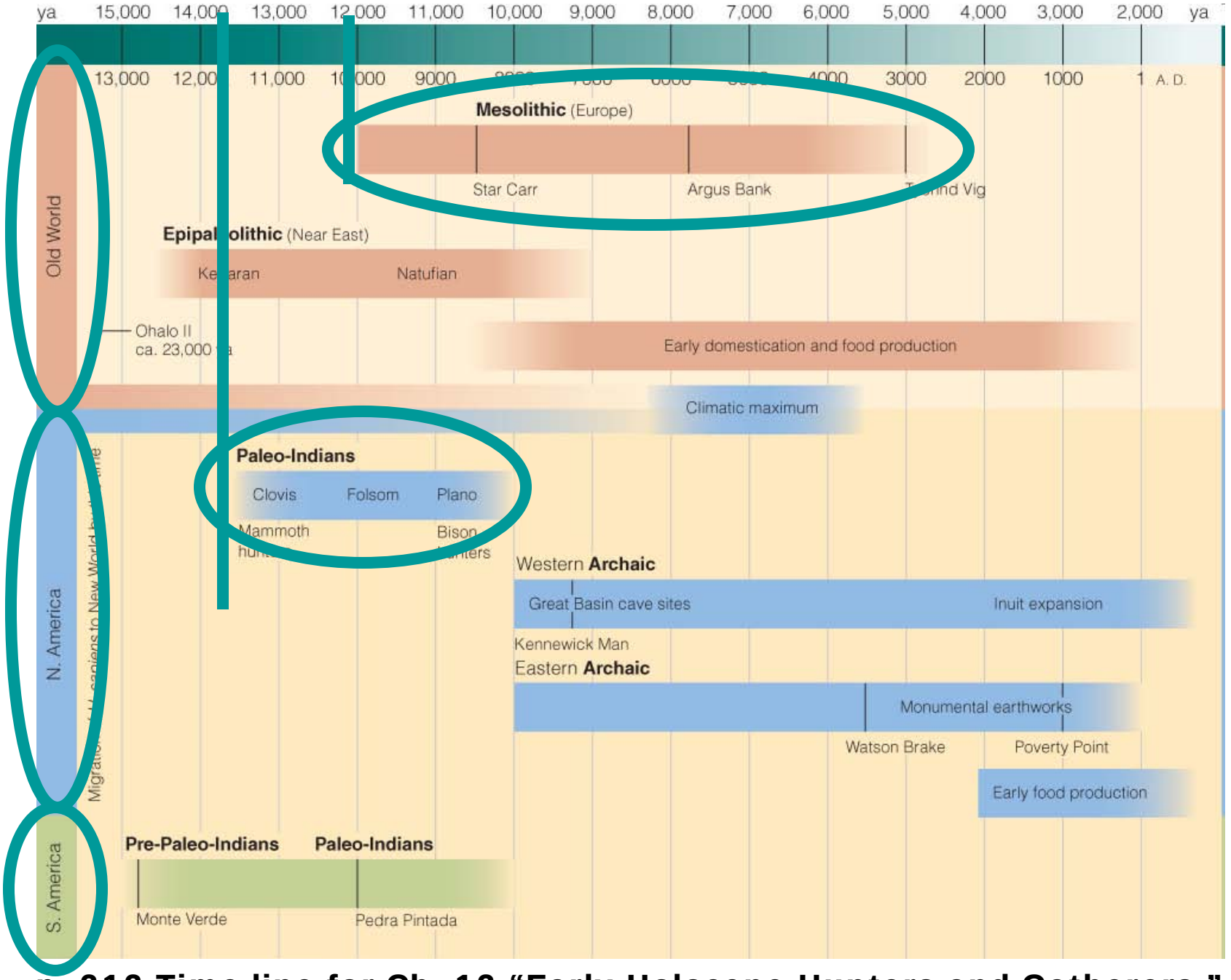


p. 293 Time line of Modern *Homo sapiens* discoveries.

What's Important Key Fossil Discoveries of Early Modern Humans and *Homo floresiensis*

Dates	Region	Site	Hominin	The Big Picture
95,00[illegible]-13,000 ya	Southeast Asia	Flores (Indonesia)	*H. floresiensis*	Late survival of very small-bodied and small-brained hominin on island of Flores; designated as different species (*H. floresiensis*) from modern humans
30,000 ya	Europe	Cro-Magnon(France)	*H. sapiens sapiens*	Famous site historically; good example of early modern humans from France
35,000 ya	Europe	Oase Cave(Romania)	*H. sapiens sapiens*	Earliest well-dated modern human from Europe
110,000 ya	Southwest Asia	Qafzeh (Israel)	*H. sapiens sapiens*	Early site; shows considerable variation
115,000 ya	Southwest Asia	Skhūl (Israel)	*H. sapiens sapiens*	Earliest well-dated modern human outside of Africa; perhaps contemporaneous with neighboring Tabun Neandertal site
160,000–154,000 ya	Africa	Herto (Ethiopia)	*H. sapiens idaltu*	Best-preserved and best-dated early modern human from anywhere; placed in separate subspecies from living *H. sapiens*

p. 309 Key Fossil Discoveries of Early Modern Humans and *Homo floresiensis*



p. 313 Time line for Ch. 13 “Early Holocene Hunters and Gatherers.”

What's Important The Most Significant Archaeological Sites Discussed in This Chapter

Location	Site	Dates (ya)	Comments
North America	**Poverty Point** (Louisiana)	3,500	A large series of earthworks that covers nearly 1 square mile; the most elaborate example of planned communities built in the Southeast in late Archaic times
	Koster (Illinois)	9,000–4,000	Stratified sequence of Archaic campsites that document the changing lifeways of people who lived on the edge of the Illinois River valley throughout most of the Archaic period
	Kennewick (Washington)	9,300	One of the few early North American human skeletons; object of a nine-year court battle to decide if scientists would be permitted to study his remains
	Danger Cave (Utah)	~10,000–historic	Deeply stratified site that contains rich evidence of desert Archaic lifeways
	Meadowcroft (Pennsylvania)	19,000–14,000	North American site that is increasingly accepted as a valid example of the pre-Clovis presence of humans in North America
	Pendejo Cave (New Mexico)	37,000–12,000	North American site for which great antiquity is claimed; as with Pedra Furada in Brazil, the evidence continues to be carefully evaluated but, as yet, not widely accepted by other researchers

p. 343 The Most Significant Archaeological Site Discussed in Ch. 13, "Early Holocene Hunters and Gatherers."

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South America	**Monte Verde** (Chile)	14,800	Pre-Clovis campsite in southern South America; the evidence is still hotly debated
	Pedra Furada (Brazil)	?50,000–?40,000	One of several South American sites for which great antiquity is claimed
Old World	**Star Carr** (England)	10,500	Mesolithic campsite excavated by Grahame Clark; greatly influenced how archaeologists still view the Mesolithic in Europe
	Abu Hureyra	13,000–7,800	Natufian and Neolithic site; the Natufian occupation was a sedentary hunter-gatherer village whose members, unlike their predecessors at Ohalo II, harvested mostly wild cereal grasses
	Ohalo II (Israel)	23,000	Kebaran or pre-Kebaran campsite; extraordinary preservation of huts, living floors, grass bedding, and plant remains, especially of small-grained grass seeds, which appear to have been a staple food
	Yana RHS (Russia)	30,000	Earliest evidence of late Pleistocene hunters beyond the Arctic Circle in northern Siberia; stone tools and horn and ivory spear foreshafts similar to those found much later on North American Paleo-Indian sites

p. 343 The Most Significant Archaeological Sites Discussed in Ch. 13, "Early Holocene Hunters and Gatherers."

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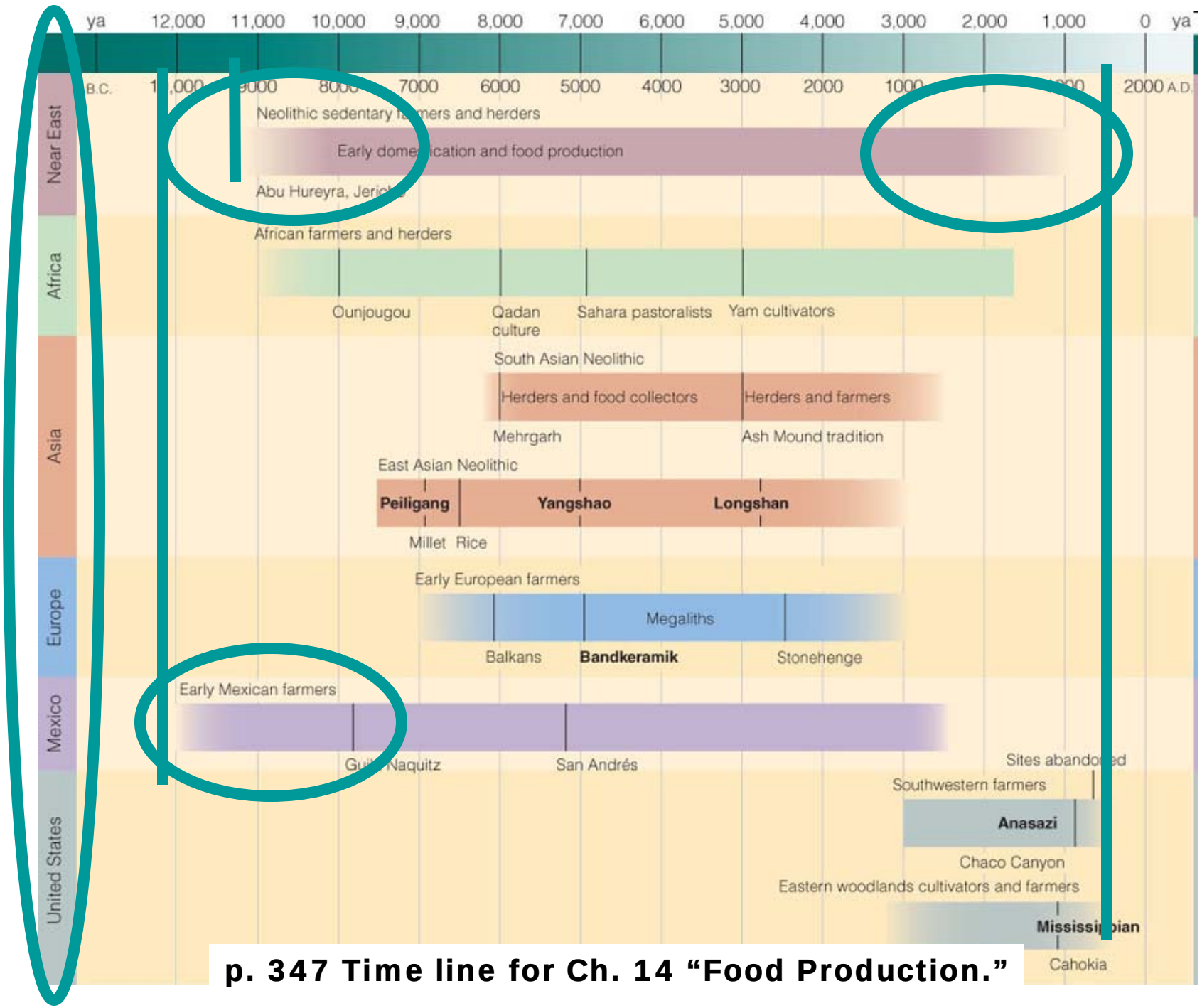

p. 347 Time line for Ch. 14 “Food Production.”

What's Important **The Most Significant Archaeological Sites Discussed in This Chapter**

Location	Site	Dates (ya)	Comments
Old World	Mehrgarh (Pakistan)	8,000–6,000	Early Neolithic community in South Asia that depended on domesticated plants and animals; represents a transition from seminomadic herding to sedentary villages and towns
	Jericho (West Bank)	<11,000–3,500	Early permanent and sedentary community in the Levant that began in Natufian times and was occupied throughout the Neolithic

p. 386 The Most Significant Archaeological Sites Discussed in Ch. 14 "Food Production."

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New World	**Las Colinas** and **Snaketown** (Arizona)	1,000	Hohokam sites in the American Southwest that show ties to Mexican centers of domestications and culture
	Chaco Canyon (New Mexico)	1,150–750	Region that contains several important Anasazi sites, many of them characterized by monumental public and ceremonial architecture; now part of the Chaco Culture National Historical Park
	Cahokia (Illinois)	1,200–600	Large Mississippian town in the American [illegible] west-central Illinois; Monks Mound is [illegible] earthwork in the United States and [illegible]
	Mesa Verde (Colorado)	1,400–700	Anasazi sites, most widely [illegible] well-preserved "cliff dwellings"; forms Mes[illegible] Park
	San Andrés (Mexico)	7,100	Soil cores ex[illegible] site yielded maize pollen, which suggests [illegible] mers were cultivating fields in the rain f[illegible] 1,000 years before maize evidence is k[illegible] highlands of Mexico
	Paloma (Peru)	7,900–5,00[illegible]	preceramic village mostly dependent on marine [illegible]urces; planting of some crops, such as bottle gourds, squashes, and beans
	Guilá Naquitz (Mexico)	10[illegible]	Small cave in Oaxaca occupied by 4–6 persons; early dated contexts for pumpkin-like squashes and maize cobs
	Guitarrero Cave (Peru)	10,200–9,200	Early evidence of cultivated plants in Andean South America
	Tehuacán Valley (Mexico)	12,000–historic times	Valley in the state of Puebla, Mexico, that was the focus of a major 1960s archaeological field investigation of the origins of agriculture; project results include an excellent stratigraphic sequence of excavated early sites

p. 386 The Most Significant Archaeological Sites Discussed in Ch. 14 "Food Production."

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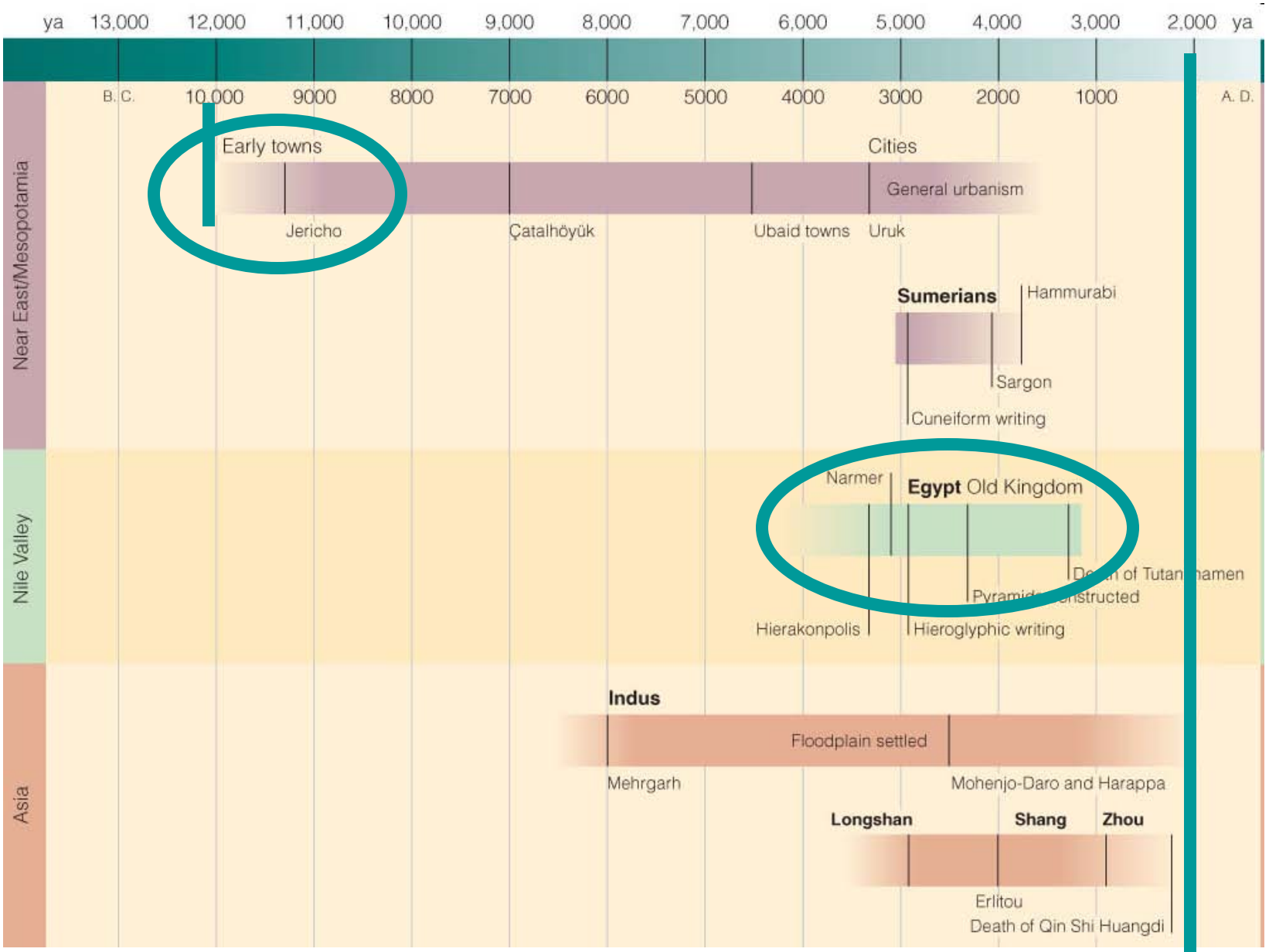
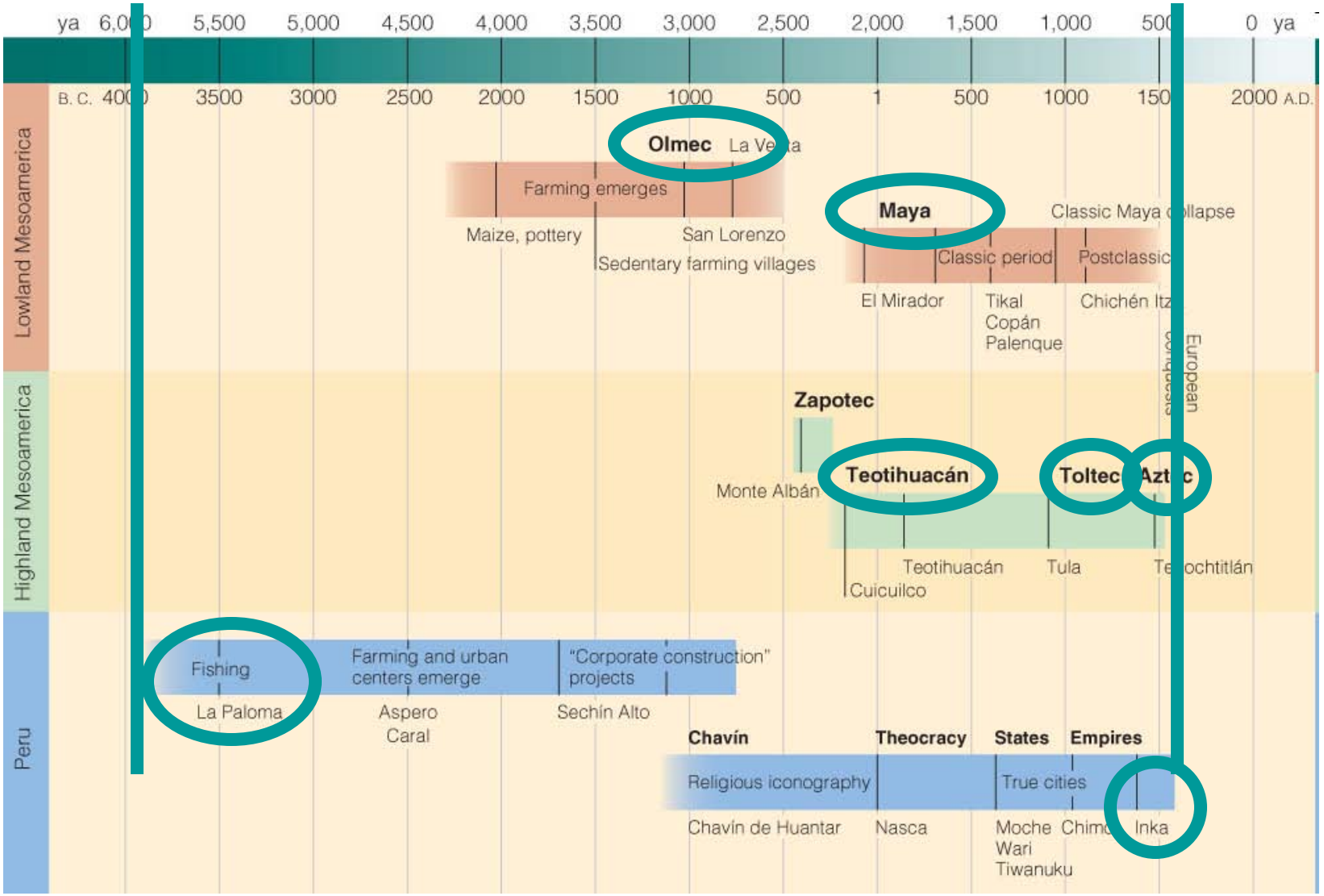


p. 397 Time line for Old World civilizations.



p. 409 Time line for New World civilizations.

What's Important The Most Significant Archaeological Sites Discussed in This Chapter

Site	Dates (ya)	Comments
Vijayanagara (India)	664–435	Capital city of the Vijayanagara empire, which ruled much of South India; located in north-central Karnataka
Çatalhöyük (Turkey)	ca. 9,000	A large Neolithic village with 5,000–8,000 inhabitants in south-central Turkey
Uruk (Iraq)	ca. 5,500–1,800	Earliest true city; associated with the Sumerian civilization of the southern Tigris-Euphrates Valley
Ur (Iraq)	ca. 4,600–2,500	City in southern Iraq; its cemetery of >1,800 graves includes 16 "royal" tombs
Memphis (Egypt)	ca. 5,100–3,300	Old Kingdom capital city located about 10 miles south of Cairo; abandoned after A.D. 641
Giza (Egypt)	ca. 4,500	Old Kingdom pyramid complex and Great Sphinx; located just to the south-west of Cairo
Mohenjo-Daro (Pakistan)	ca. 4,600–3,900	Most extensively excavated Indus civilization city; located in the Indus Valley of south-central Pakistan
Harappa (Pakistan)	ca. 4,600–3,900	Indus civilization city in northeastern Pakistan
Erlitou (China)	ca. 4,000	Elaborate site associated with the earliest phase of civilization in northern China
Shixianggou, Zhengzhou (China)	3,600–3,046	Early Shang capital cities
San Lorenzo (Mexico)	3,150–2,900	Olmec civic-ceremonial center in southern Veracruz
Tikal (Guatemala)	ca. 2,200–1,100	Major Maya center in the Petén region of northern Guatemala
Teotihuacan (Mexico)	ca. 2,200–1,350	Earliest city-state to dominate the Valley of Mexico, one of the largest urban centers in the New World up to the nineteenth century
Tula (Mexico)	ca. 1,200–850	Toltec capital in the Valley of Mexico
Tenochtitlan (Mexico)	675–480	Aztec capital city in the Valley of Mexico
Chavín de Huantar (Peru)	ca. 2,900–2,500	Chavín civic-ceremonial center in the northern highlands of Peru
Cuzco (Peru)	ca. 1,000–465	Inka capital in the southern Peruvian highlands

p. 424 The Most Significant Archaeological Site Discussed in Ch. 15, "The First Civilizations."

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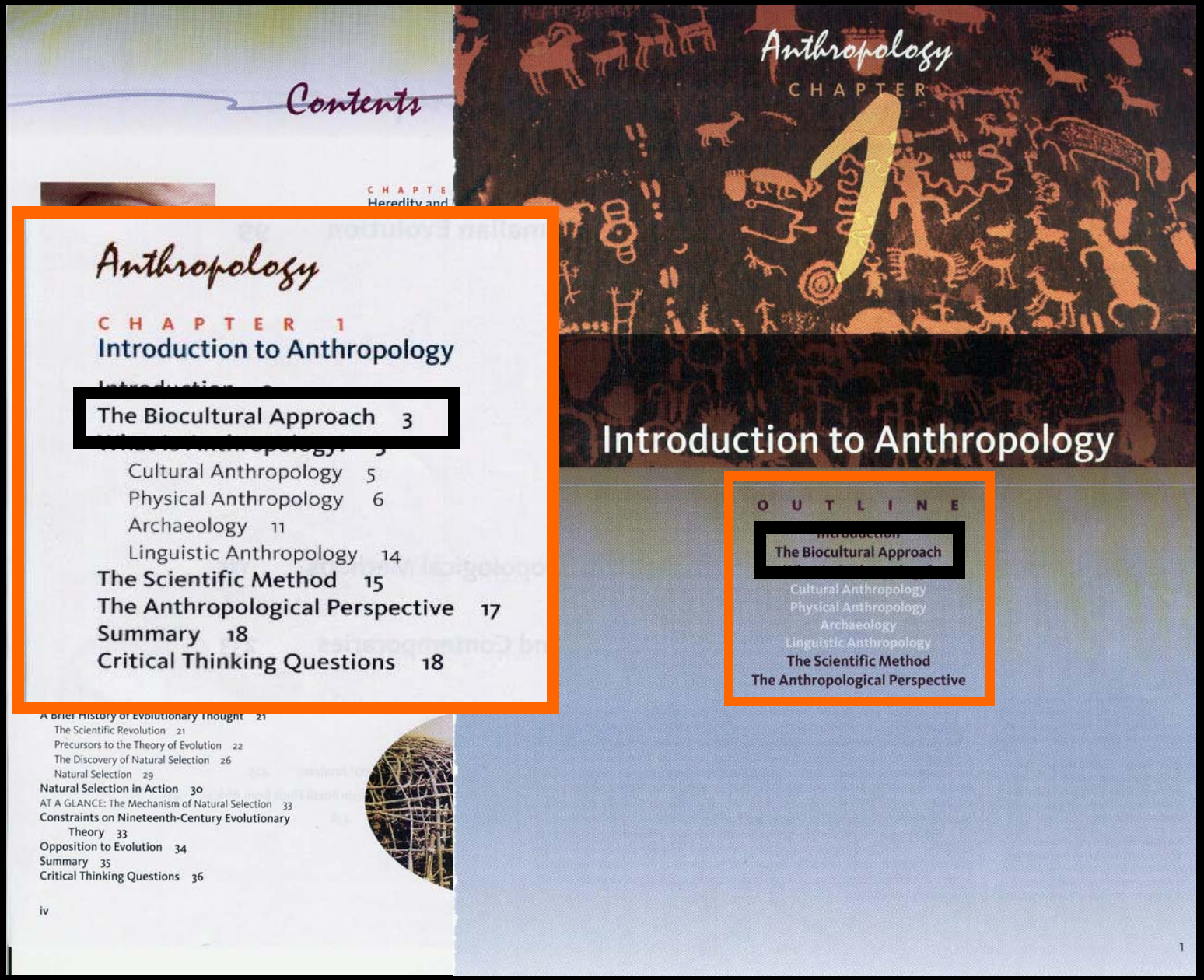

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Anthropology

CHAPTER 1

Introduction to Anthropology

OUTLINE

The Biocultural Approach

Cultural Anthropology
Physical Anthropology
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Linguistic Anthropology
The Scientific Method
The Anthropological Perspective

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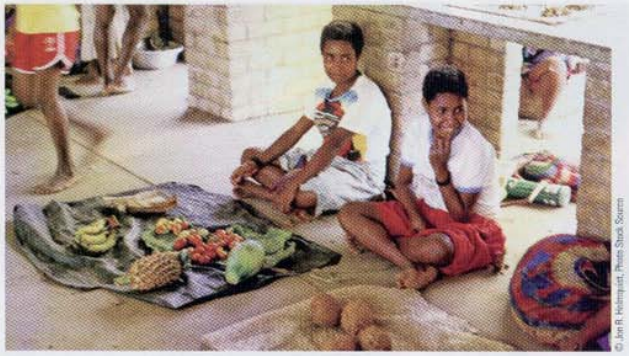

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Figure **1-1**
Modern humans are products of both culture and biology, and human culture can be amazingly diverse. These market vendors at Wewak, on Papua New Guinea's northern coast, may find that their customers speak a different language even if they come from only a few towns away.

The Biocultural Approach

The concept of **biocultural evolution** helps give all anthropologists a shared perspective. Humans are the product of the combined influences of biology and **culture** that have shaped our evolutionary history over the last several million years. It is by tracing the changing interaction between biology and culture and understanding *how* the process worked in the past and how it continues to work today that we are able to come to grips scientifically with what we are and how we came to be.

As we'll emphasize in this book, humans have occupied center stage in only one short scene of life's evolutionary play. Our role is fascinating; but because of cultural factors, we have also become a threat to many life-forms, including ourselves. Culture is therefore an extremely important concept, not only as it pertains to modern humans but also in terms of its critical role in human evolution.

Viewed in an evolutionary perspective, human culture can be described as the strategy people use in adapting to the natural and social environments in which they live. Culture includes technologies that range from stone tools to computers; subsistence patterns ranging from hunting and gathering to agribusiness on a global scale; housing types from thatched huts to skyscrapers; and clothing from animal skins to synthetic fibers (Fig. 1-2). Because religion, values, social organization, language, kinship, marriage rules, gender roles, and so on, are all aspects of culture, each culture shapes people's perceptions of the external environment, or worldview, in particular ways that distinguish that culture from all others. One fundamental point to remember is that culture is *learned* and not biologically determined. In other words, we inherit genes that influence our biological characteristics, but those genes have no impact on cultural behavior.

For example,* if a young South Indian girl is raised in New Orleans by Italian American parents, she'll acquire, through the process called **enculturation**, all those aspects

*These examples draw upon two very different enculturation experiences to illustrate what enculturation is all about. If, like most readers, you didn't grow up in either of these cultural webs, you may find them impenetrable because you're an outsider. It's okay. The main point here is that enculturation plays an enormous role in shaping who we are. Need a quick guide to some of the terms? In New Orleans (aka the Big Easy), red beans and rice are a traditional Monday dish; a roux is flour browned in oil and used as the base for many South Louisiana dishes; many people view the choupic as a "trash fish" and won't eat it; a court bouillon is a fish stew, often made with redfish. In Mysore, a city in South India, Kannada is the local language; *filmi gana* is Hindi for "movie music," an extremely popular music genre throughout South Asia; and idli are steamed cakes made of fermented rice or *rava* (farina) and typically served with onion sambar, a spicy dal soup.

biocultural evolution The mutual, interactive evolution of human biology and culture; the concept that biology makes culture possible and that developing culture further influences the direction of biological evolution; a basic concept in understanding the unique components of human evolution.

culture All aspects of human adaptation, including technology, traditions, language, religion, and social roles. Culture is a set of learned behaviors; it is transmitted from one generation to the next through learning and not by biological or genetic means.

enculturation The process by which individuals, generally as children, learn the values and beliefs of the family, peer groups, and society in which they are raised.

continue on in a similar manner with the rest of the chapters

Heredity and Evolution

CHAPTER 2

The Development of Evolutionary Theory

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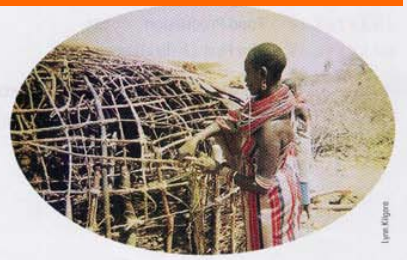

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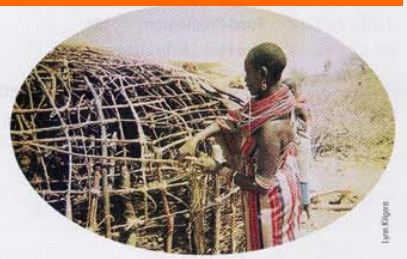

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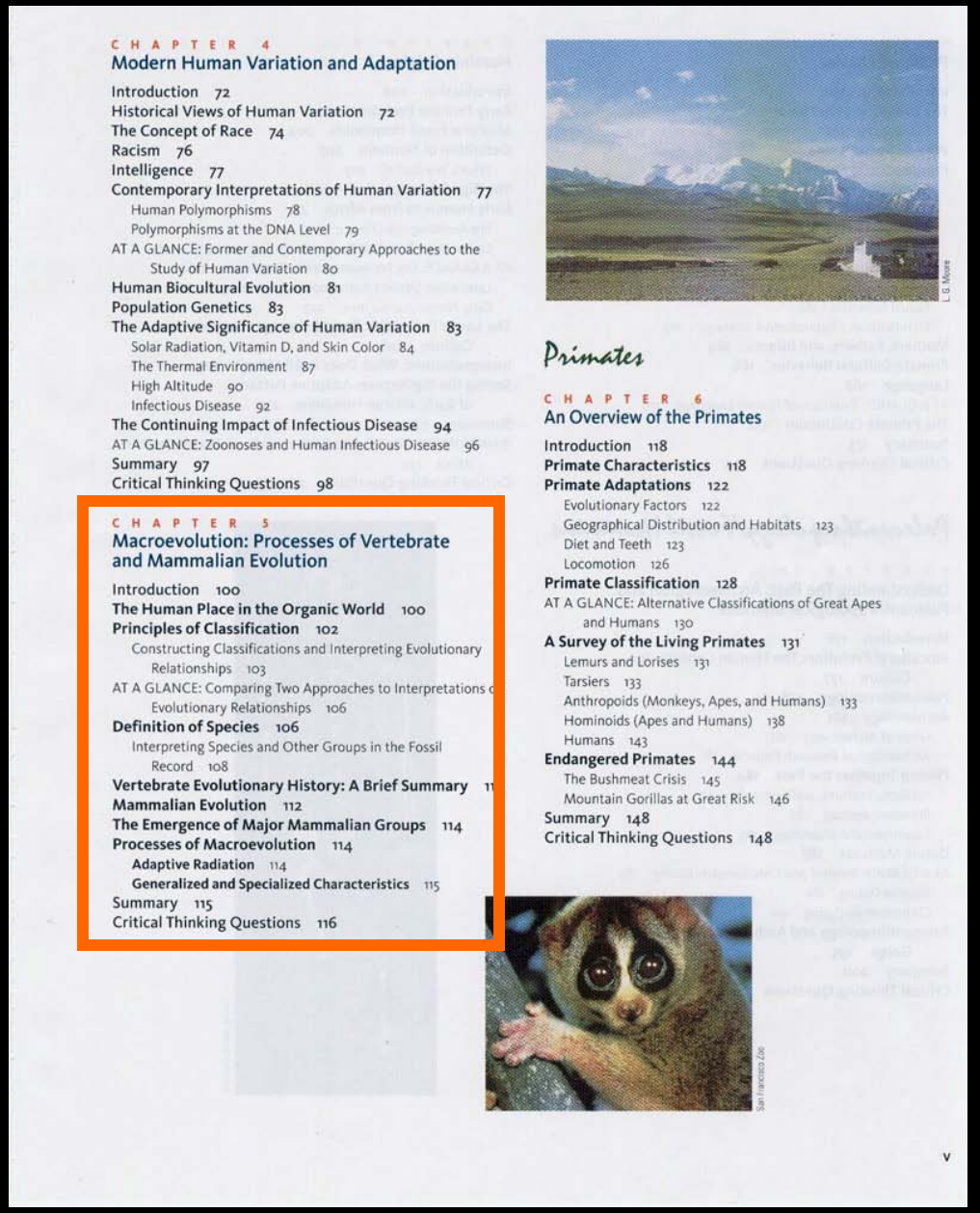

L.S. Moore

Primates

San Francisco Zoo

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2. Why is it important?
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Primates

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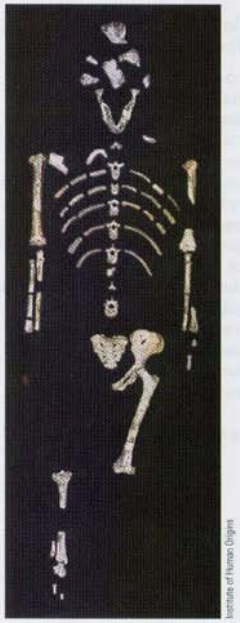
Paleoanthropology/Fossil Hominins



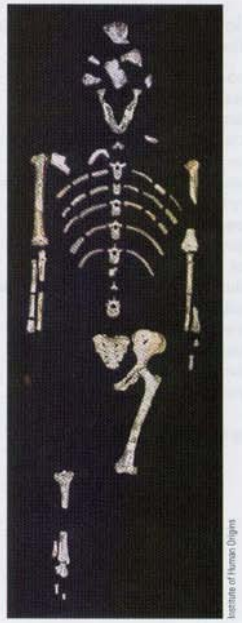
continue on in a similar manner with the rest of the chapters

1. What is it?
2. Why is it important?
3. When did it happen?

CHAPTER 7
Primate Behavior

Exam #1
on Chs. 01-07
and other class materials

CHAPTER 9
Hominin Origins

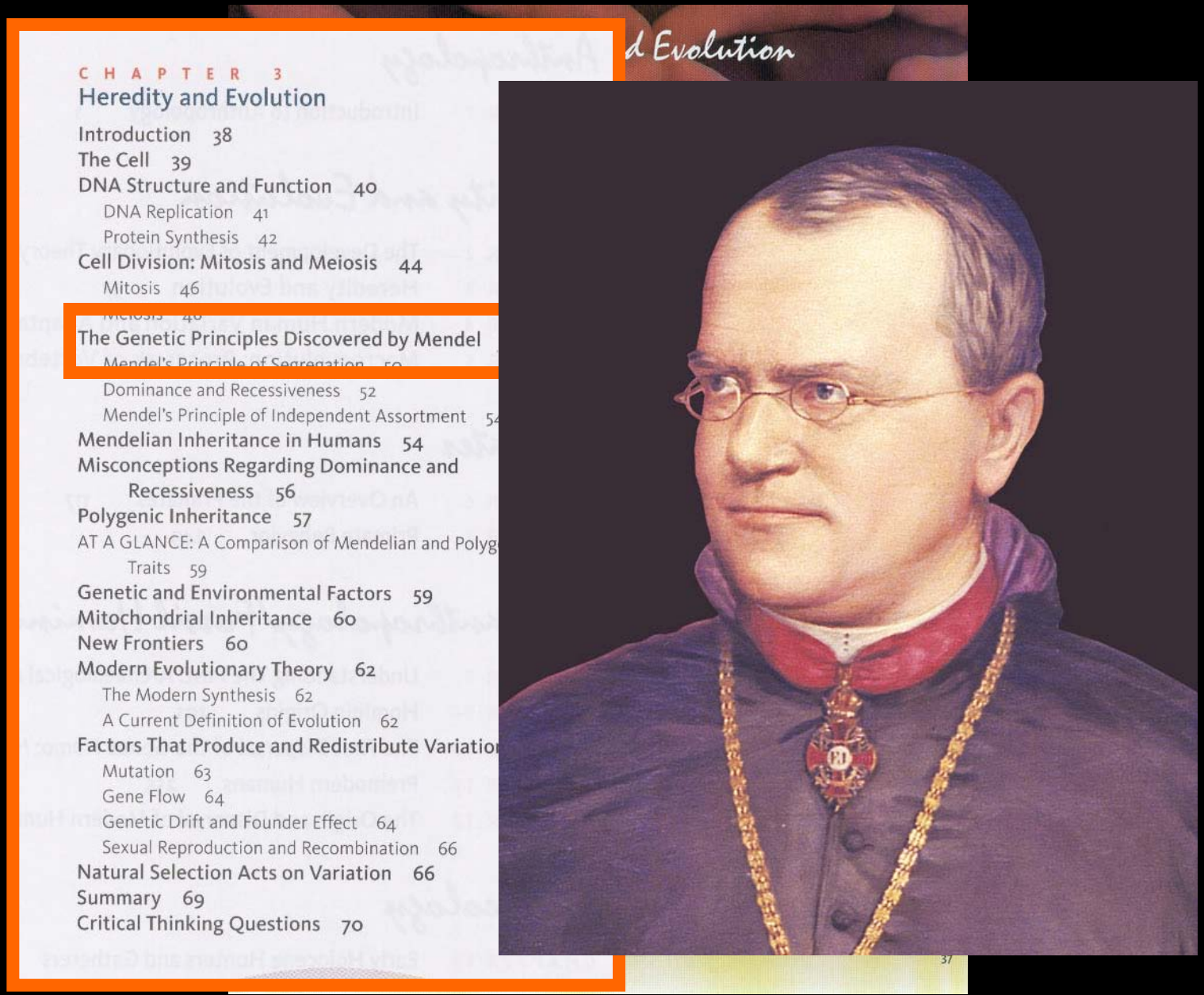


What about
the names of people?

names of people

- **know the major figures from Bishop Ussher through the present**
- **generally these are people whose pictures are in the text chapters, or who are discussed at some length in class**

Know the people singled out in the Contents sections



CHAPTER 3

Heredity and Evolution

Know the people singled out in the Contents sections

Know the people singled out in the Contents sections

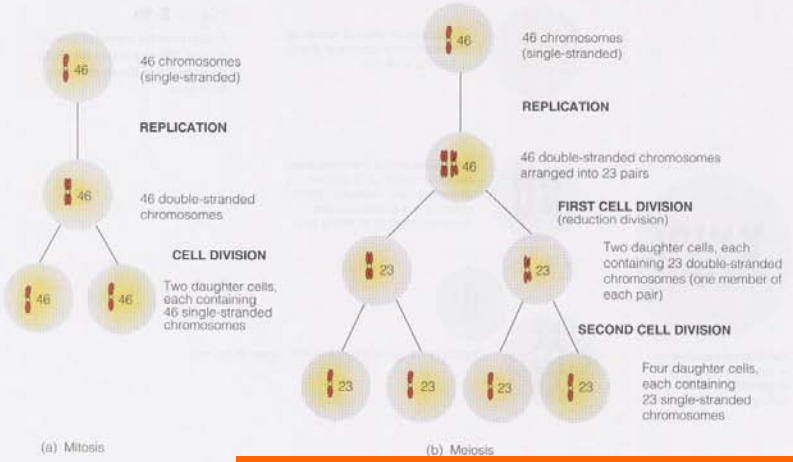


Figure 3-11

Mitosis and meiosis compared. (a) In mitosis, one division produces two daughter cells, each of which contains 46 chromosomes. (b) Meiosis is characterized by two divisions. After the first, there are two cells, each containing only 23 chromosomes (one member of each original chromosome pair). Each daughter cell divides again, so that the final result is four cells, each with only half the original number of chromosomes.

The Genetic Principles Discovered by Mendel

to be resolved (Fig. 3-12). Mendel was a monk living in an abbey in what is now the Czech Republic. At the time he began his research, he had already studied botany, physics, and mathematics at the University of Vienna, and he also had performed various experiments in the monastery gardens. These experiments led him to explore the various ways in which physical traits, such as color or height, could be expressed in plant **hybrids**.

Mendel worked with garden peas, concentrating on seven different traits, each of which could be expressed in two different ways (Fig. 3-13). We want to emphasize that the principles Mendel discovered apply to all biological organisms, not just peas; so we discuss Mendel's pea experiments only to illustrate the basic rules of inheritance.

Figure 3-12

Portrait of Gregor Mendel.

MENDEL'S PRINCIPLE OF SEGREGATION

Mendel began by crossing parent (P) plants that produced only tall plants with others that produced only short ones (Fig. 3-14). Blending theories of inheritance would have predicted that the hybrid offspring of the initial crosses (called the F_1 plants) would be intermediate in height, but they weren't. Instead, they were all tall.

hybrids Offspring of mixed ancestry; heterozygotes.

10th Ed. p. 50

Charles Darwin

(1809 - 1882)

Origin of Species
1859

Descent of Man
1871

Charles Darwin

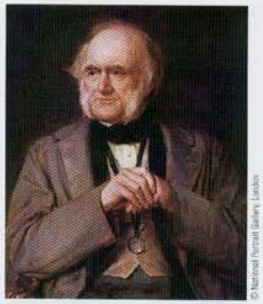


Figure 2-6
Portrait of Charles Lyell.

The theory of uniformitarianism flew in the face of Cu
Additionally, Lyell emphasized the obvious: namely, that for su
to produce momentous change, the earth would have to be far older than anyone had previously suspected. By providing an immense time scale and thereby altering perceptions of earth's history from a few thousand to many millions of years, Lyell changed the framework within which scientists viewed the geological past. Thus, the concept of "deep time" (Gould, 1987) remains one of Lyell's most significant contributions to the discovery of evolutionary principles. The immensity of geological time permitted the necessary time depth for the inherently slow process of evolutionary change.

THE DISCOVERY OF NATURAL SELECTION

Charles Darwin Having already been introduced to Erasmus Darwin, you shouldn't be surprised that his grandson Charles grew up in an educated family with ties to intellectual circles. Charles Darwin (1809–1882) was one of six children of Dr. Robert and Susanna Darwin (Fig. 2-7). Being the grandson not only of Erasmus Darwin but also of the wealthy Josiah Wedgwood (of Wedgwood china fame), Charles grew up enjoying the comfortable lifestyle of the landed gentry in rural England.

As a boy, he had a keen i
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dispel the generally held view
fact, his performance at school

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medicine. It was there that Darw
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During that time (the 182
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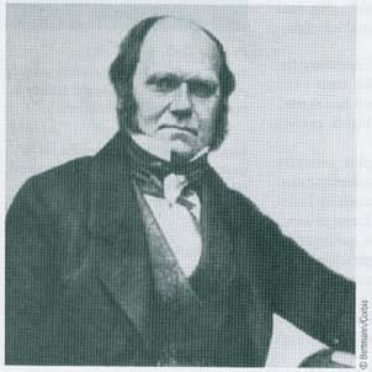
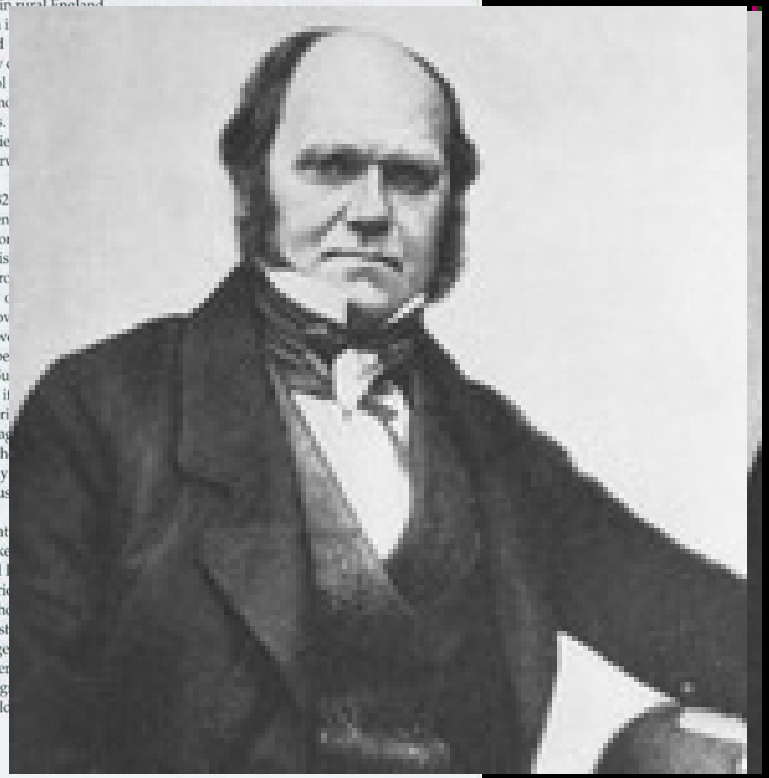
tion that would

transmutation The change of one species to another. The term *evolution* did not assume its current meaning until the late nineteenth century.

Figure 2-7
Black-and-white photograph of Charles Darwin taken five years before the publication of *Origin of Species*.





10th Ed. pp. 26-29

Slides: 05 begin here

12. Charles Darwin (1809-1882)

pp. 6,
21, 23,
24, 25,
26-29,
34, 61,
62, 73,
162,
244,
356

- ***The Voyage of the Beagle*, 1831-1836**

H.M.S Beagle in the Strait of Magellan

The route of HMS *Beagle*.
Understanding Humans, 10th Ed., p. 27

- ***On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, 1859**

(See 13. below)

Thomas Malthus

Thomas Malthus In 1798, Thomas Malthus (1766–1834), an English clergyman a economist, wrote *An Essay on the Principle of Population*, which inspired both Char Darwin and Alfred Wallace in their separate discoveries of natural selection (Fig. 2–7). In essay, Malthus said that human populations could double in size every 25 years if they were kept in check by limited food supplies. That is, population size increases exponentially wh food supplies remain relatively stable.

Malthus, who was arguing for limits to population growth, focused on humans becau we can increase food supplies artificially and therefore reduce constraints on population si However, the same logic could be applied to nonhuman organisms, and both Darwin a Wallace later extended Malthus' principles to all organisms. They did this in recognition the fact that, in nature, the tendency for populations to increase is always checked by resou availability; and this situation results in constant competition for food and other resourc

Charles Lyell Charles Lyell (1797–1875), the son of Scottish landowners, is consider the founder of modern geology (Fig. 2–8). He was a barrister, a geologist, and for many yea Charles Darwin's friend and mentor. Before meeting Darwin in 1836, Lyell had earn acceptance in Europe's most prestigious scientific circles, thanks to his highly prais *Principles of Geology*, first published during the years 1830–1833.

In this immensely important work, Lyell argued that the geological processes observed the present are the same as those that occurred in the past. This theory, called **uniformit ianism**, didn't originate entirely with Lyell, having been proposed by James Hutton in the l 1700s. Even so, it was Lyell who demonstrated that such forces as wind, water erosion, lo flooding, frost, decomposition of vegetable matter, volcanoes, earthquakes, and glacial mo ments had all contributed in the past to produce the geological landscape that exists in present. What's more, the fact that these processes still occurred indicated that geologi change was still happening and that the forces driving such change were consistent, or *u form*, over time. In other words, although various aspects of the earth's surface (for exam climate, plants, animals, and land surfaces) are variable through time, the *underlying proce* that influence them are constant.

The theory of uniformitarianism flew in the face of Cuvier's catastrophism. Additiona Lyell emphasized the obvious: namely, that for such slow-acting forces to produce mom tous change, the earth would have to be far older than anyone had previously suspected. providing an immense time scale and thereby altering perceptions of earth's history fro few thousand to many millions of years, Lyell changed the framework within which sci tists viewed the geological past. Thus, the concept of "deep time" (Gould, 1987) remains of Lyell's most significant contributions to the discovery of evolutionary principles. immensity of geological time permitted the necessary time depth for the inherently s process of evolutionary change.

Lyell, the father of geology, stated the theory of uniformitarianism in his *Principles of Geology*.

THE DISCOVERY OF NATURAL SELECTION

Charles Darwin Having already been introduced to Erasmus Darwin, you shouldn't be surprised that his grandson Charles grew up in an educated family with ties to intellectual circles. Charles Darwin (1809–1882) was one of six children of Dr. Robert and Susanna Darwin (Fig. 2–9). Being the grandson not only of Erasmus Darwin but also of the wealthy Josiah Wedgwood (of Wedgwood china fame), Charles grew up enjoying the comfortable lifestyle of the landed gentry in rural England.

As a boy, he had a keen interest in nature and spent his days fishing and collecting shells, birds' eggs, and rocks. However, this interest in natural history didn't dispel the generally held view of family and friends that he was in no way remarkable. In fact, his performance at school was no more than ordinary.

After the death of his mother when he was eight years old, Darwin was raised by his father and his older sisters. Because he showed little interest in anything except hunting, shooting, and perhaps science, his father sent him to Edinburgh University to study medicine. It was there that Darwin first became acquainted with the evolutionary theories of Lamarck and others.

During that time (the 1820s), notions of evolution were becoming feared in England and elsewhere. Anything identifiable with postrevolutionary France was viewed with suspicion by the established order in England. Lamarck, partly because he was French, was especially vilified by British scientists.

uniformitarianism The theory that the earth's features are the result of long-term processes that continue to operate in the present as they did in the past. Elaborated on by Lyell, this theory opposed catastrophism and contributed strongly to the concept of immense geological time.

10th Ed. p. 25

Thomas Malthus

(1766-1834)

“Essay on the Principle of Population”

1798

10th Ed. p. 25

pp. 33-36

top of page

13. Darwin's Theory of Evolution Through Natural Selection

- **Observation 1:**

  Without environmental pressures, every species tends to *multiply in geometric progression* ("superfecundity").
  (Source: Thomas Malthus, *Essay on the Principle of Population*, 1789, and others)

Thomas Malthus
Source: Turnbaugh *et al.* (2002). p. 30

- **Observation 2:**

  But under field conditions, although fluctuations occur frequently, the size of a population remains remarkably constant over long periods of time.
  (Source: Universal observations)

- **Observation 3:**

  Limits are placed on population expansion by limited environmental resources.
  (Source: Observation reinforced by Malthus)

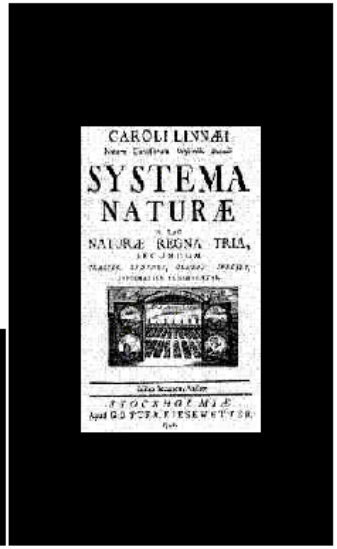
- **Conclusion 1:**

  Therefore not all organisms will survive to adulthood and reproduce, and therefore there must be a "*struggle for existence*."

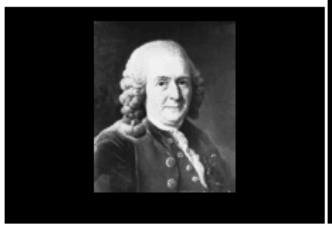
pp. 26-27, 88, 177

top of page

6. Karl von Linné (Linnaeus), 1707-1778



- **Provided a system of biological classification in *Systema Naturae*, 1758**



- **Related Terms:**
  - **binomial nomenclature**

p. 177

Kingdom . . .	Genus	Species	Variety	Common Name
Animalia . . .	*Homo*	*sapiens*	*sapiens*	"modern" humans
Animalia . . .	*Gorilla*	*gorilla*	*gorilla*	"gorilla"
Animalia . . .	*Homo*	*erectus*	*pekinensis*	"Peking Man" / "Peking People"

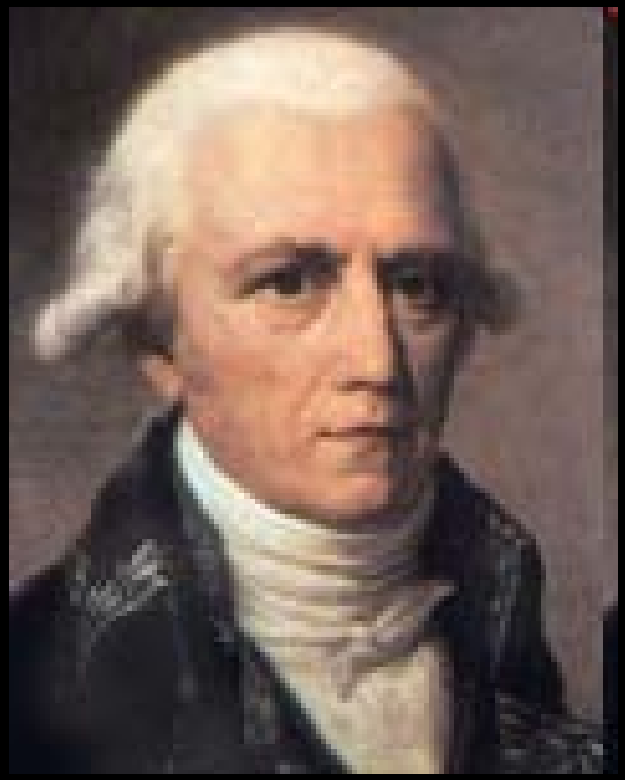
- **Related Terms:**
  - **taxon**
  - **taxonomy**

Lamarck

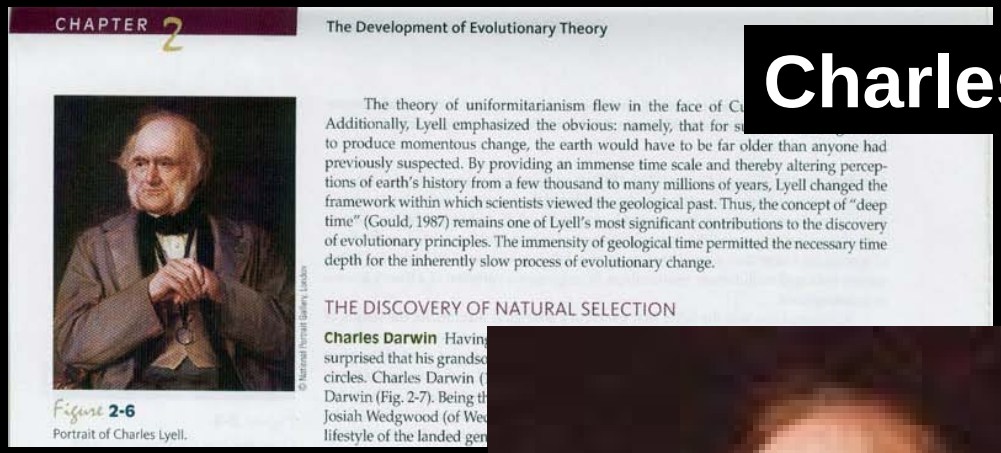
Believed that species change was influenced by environmental change.

He is known

for his theory of the inheritance of acquired characteristics.



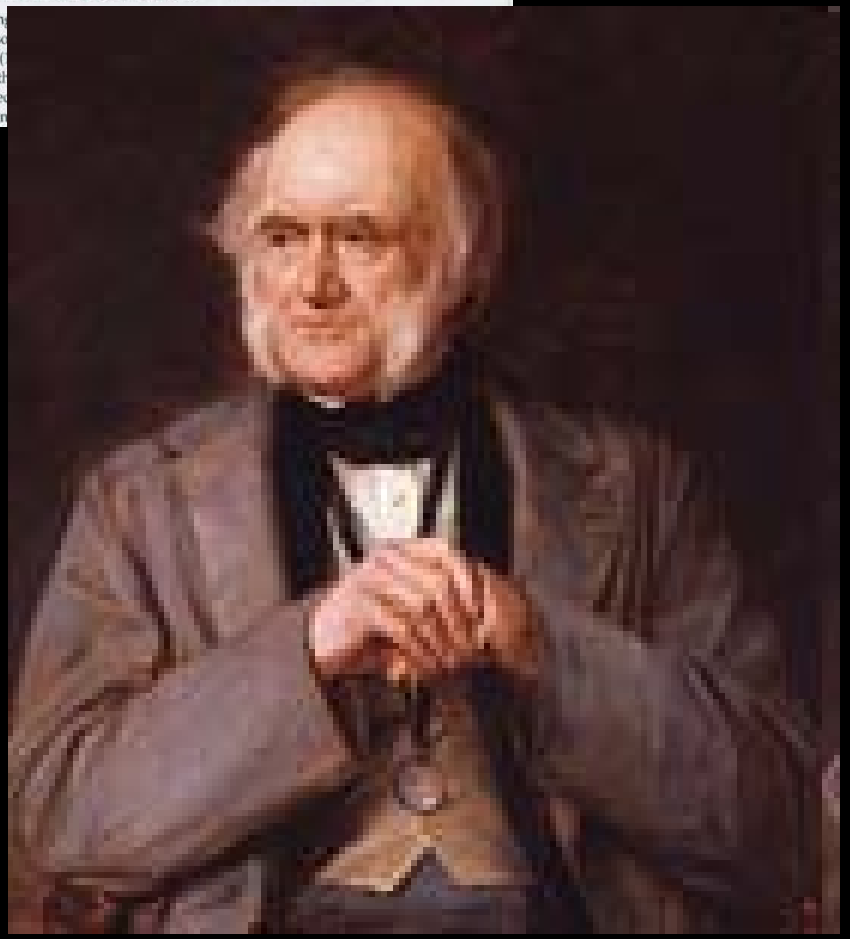
10th Ed. p. 23



Charles Lyell

Lyell

The father of geology, stated that the theory of uniformitarianism in his *Principles of Geology*.

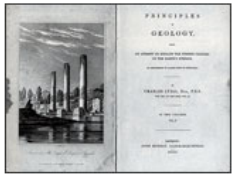


10th Ed. p. 26

10. Charles Lyell (1797-1875)

pp. 11, 29, 33, 352

- *Principles of Geology*, 1830
  - Related Terms:
    - uniformitarianism



top of page

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11. Jacques Boucher de Perthes (1788-1868)

- "Chipped stone tools are human artifacts" (1838-1839)
- "And the tools may be as old as a million years."

important people / works

Alfred Russel Wallace

Independently uncovered the key to the evolutionary process.

10th Ed. p. 29

CHAPTER 2 The Development of Evolutionary Theory

"struggle for existence." The idea that in each generation more offspring are born than survive to adulthood, coupled with the notions of competition for resources and biological diversity, was all Darwin needed to develop his theory of natural selection. He wrote: "It at once struck me that under these circumstances favourable variations would tend to be preserved, and unfavourable ones to be destroyed. The result of this would be the formation of a new species" (F. Darwin, 1950, pp. 53–54). Basically, this quotation summarizes the entire theory of natural selection.

By 1844 Darwin had written a short summary of his views on natural selection, but he didn't think he had enough data to support his hypothesis, so he continued his research without publishing. He also had other reasons for not publishing what he knew would be, to say the least, a highly controversial work. He was deeply troubled by the fact that his wife, Emma, saw his ideas as running counter to her strong religious convictions (Keynes, 2001). Also, as a member of the established order, he knew that many of his friends and associates were concerned with threats to the status quo, and evolutionary theory was viewed as a very serious

Wallace (1823–1913) was born
at the age of 14, and with little
became interested in collecting
he Amazon, where he acquired
854, he sailed for Southeast Asia

ies were descended from other
l by environmental factors. The
olish, but still he hesitated.
Tendency of Varieties to Depart
d evolution as a process driven
lace's paper, Darwin feared that
he himself had developed. He
both men were read before the
ace was out of the country, and

rwin completed and published
59, the storm broke, and it still
s much scholarly praise for the
port. The riddle of species was
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N

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explained. In the struggle for
favorable variations would sur-
with unfavorable variations
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ase.
within all species. (Today we
al twins, no two individuals

by Means of Natural Selection, or the
uggle for Life.

28

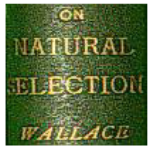
pp. 32-33

14. Alfred Russel Wallace (1823-1913)

top of page

- **Working separately from Darwin, arrived at the same generalizations at the same time**

Alfred Russel Wallace
Source: Turnbaugh *et al*. (2002). p. 33



15. Both Darwin and Wallace Knew: Principle *cause* of natural selection is the *environment*

Ch. 3

16. **Problem:** Neither Darwin nor Wallace Knew *The Source* of individuals variation

- **Answer eventually was in the modern study of genetics**

REM:

pay special attention

to the definitions

in the margins of the text

studying from the text

CHAPTER 1

FOCUS QUESTIONS

What is anthropology, and what can it tell us about our past, present, and future?

How does anthropological research work?

Go to the follo… MIs for interactive activities and ex… pics covered in this chapter:

- Virtual Lab… Physical Anthropolo… , Third Edition
- Genetics i… gy: Principles and Applicatio… First Edition
- Hominid Fo… ractive Atlas CD-ROM, …

Introduction

A trip along the northern coast of New Guinea would be high adventure for most of us. We'd be treated to great natural beauty, welcoming people, and at least one remarkable observation that we probably wouldn't anticipate—the northern coast holds an extraordinary diversity of local languages. The inhabitants of villages separated by only a few miles may speak different languages. Language diversity is nearly as great in the rest of New Guinea; on an island only a little bigger than the state of Texas, more than 800 languages are spoken—or roughly 15 percent of the world's languages (Wurm, 1994, p. 93).

But why should anyone care how many languages are spoken on the island of New Guinea? Mostly because language diversity is a good rough measure of cultural diversity, and humans exhibit an enormous range of cultural diversity. But biologically, human populations from around the world are very similar to each other. In fact, regardless of their extraordinary cultural diversity, humans show less genetic variation than can be found in a group of wild chimpanzees (Pagel and Mace, 2004).

The main points of this example are, first, that modern humans are cultural *and* biological organisms, and they cannot be adequately understood without examining them from both perspectives. Secondly, human beings are probably unique among other animals because they alone have the capacity to ask the question, "why?" These points illustrate fundamental motivations for the field of anthropology and for this book as an introduction to the biocultural perspective of human evolution.

Anthropology addresses the entire scope of the human experience, past and present, and deliberately brings multiple perspectives to bear on research. Such a broad focus encompasses all topics related to behavior, including social relationships (for example, kinship and marriage patterns), religion, ritual, technology, subsistence techniques, and economic and political systems. Anthropology is also concerned with the numerous biological and evolutionary dimensions of our species, such as genetics, anatomy, skeletal structure, adaptation to disease and other environmental factors, growth, nutrition, and ultimately, all the evolutionary processes that have resulted in the development of modern humans. In short, then, anthropology is a holistic discipline that studies all aspects of what it is to be human.

In contrast, an economist, for example, might study market systems—the production, distribution, and consumption of goods—and only rarely, if ever, consider the effects of genetics, evolutionary factors, religion, or kinship on economic systems. But anthropology's holistic approach recognizes that many factors contribute to whatever we humans do, even including economic transactions. Indeed, anthropologists incorporate findings from many academic fields (for example, psychology, biology, history, and religious studies) as they seek to understand and explain what being human is all about. In a practical sense, however, no single anthropologist can hope to encompass the entire discipline.

In keeping with anthropology's commitment to a holistic perspective, aspects of this discipline rest firmly both in science, because anthropologists answer many questions by applying the scientific method in their research, and in the humanities, because they also apply interpretive methods to achieve an understanding of such human qualities as love, individual or group identity, compassion, and ethnicity.

anthropology The field of inquiry that studies human culture and evolutionary aspects of human biology; includes cultural anthropology, archaeology, linguistics, and physical anthropology.

biocultural evolution The mutual, interactive evolution of human biology and culture; the concept that biology makes culture possible and that developing culture further influences the direction of biological evolution; a basic concept in understanding the unique components of human evolution.

culture All aspects of human adaptation, including technology, traditions, language, religion, and social roles. Culture is a set of learned behaviors ; it is transmitted from one generation to the next through learning and not by biological or genetic means.

ANTHROPOLOGY

CHAPTER 1

Introduction to Anthropology

OUTLINE

studying from the text

have a look

at

the Glossary items

on pp. 441-450

GLOSSARY

acclimatization Physiological responses to changes in the environment that occur during an individual's lifetime. Such responses may be temporary or permanent, depending on the duration of the environmental change and when in the individual's life it occurs. The *capacity* for acclimatization may typify an entire species or population, and because it is under genetic influence, it is subject to evolutionary factors such as natural selection or genetic drift.

Acheulian (ash'-oo-lay-en) Pertaining to a stone tool industry from the Lower and Middle Pleistocene; characterized by a large proportion of bifacial tools (flaked on both sides). Acheulian tool kits are very common in Africa, Southwest Asia, and western Europe, but they're thought to be less common elsewhere. Also spelled *Acheulean*.

adaptation Functional response of organisms or populations to the environment. Adaptation results from evolutionary change (specifically, as a result of natural selection).

adaptive niche The entire way of life of an organism: where it lives, what it eats, how it gets food, how it avoids predators, and so on.

adaptive radiation The relatively rapid expansion and diversification of life-forms into new ecological niches.

affiliative Pertaining to amicable associations between individuals. Affiliative behaviors, such as grooming, reinforce social bonds and promote group cohesion.

agriculture Cultural activities associated with planting, herding, and processing domesticated species; farming.

allele frequency In a population, the percentage of all the alleles at a locus accounted for by one specific allele.

alleles Alternate forms of a gene. Alleles occur at the same locus on paired chromosomes and thus govern the same trait. However, because they are different, their action may result in different expressions of that trait. The term *allele* is often used synonymously with *gene*.

alluvial Deposited by streams, usually during flood stages.

altruism Behavior that benefits another individual but at some potential risk or cost to oneself.

amino acids Small molecules that are the components of proteins.

analogies Similarities between organisms based strictly on common function, with no assumed common evolutionary descent.

Anasazi (an-ah-saw'-zee) Ancient culture of the southwestern United States, associated with preserved cliff dwellings and masonry pueblo sites.

ancestral (primitive) Referring to characters inherited by a group of organisms from a remote ancestor and thus not diagnostic of groups (lineages) that diverged after the character first appeared.

anthropoids Members of a suborder of Primates, the *Anthropoidea* (pronounced "ann-throw-poid'-ee-uh"). Traditionally, the suborder includes monkeys, apes, and humans.

anthropology The field of inquiry that studies human culture and evolutionary aspects of human biology; includes cultural anthropology, archaeology, linguistics, and physical anthropology.

anthropometry Measurement of human body parts. When osteologists measure skeletal elements, the term *osteometry* is often used.

anthropomorphic (*anthro*, meaning "man," and *morph*, meaning "shape") Having or being given humanlike characteristics.

antigens Large molecules found on the surface of cells. Several different loci governing antigens on red and white blood cells are known. (Foreign antigens provoke an immune response in individuals.)

antiquarian Relating to an interest in things and texts of the past.

arboreal Tree-living; adapted to life in the trees.

arboreal hypothesis The traditional view that primate characteristics can be explained as a consequence of primate diversification into arboreal habitats.

archaeobotany The analysis and interpretation of the remains of ancient plants recovered from the archaeological record.

Archaic North American archaeological period that follows the end of the last Ice Age and traditionally ends with the beginning of the use of ceramics; equivalent to the Mesolithic in the Old World.

argon-argon ($^{40}Ar/^{39}Ar$) method Working on a similar basis as the potassium-argon method, this approach uses the ratio of argon-40 to argon-39 for dating igneous and metamorphic rocks; it offers precision and temporal range advantages for dating some early hominid sites.

artifacts Objects or materials made or modified for use by hominids. The earliest artifacts tend to be tools made of stone or, occasionally, bone.

Atahuallpa (at-a-wall'-pah) Inka leader defeated by Pizarro.

Athabaskan Largest Native American language family in North America; includes more than 35 languages spoken in western North America.

Aurignacian Pertaining to an Upper Paleolithic stone tool industry in Europe beginning at about 40,000 ya.

aurochs European wild oxen, ancestral to domesticated cattle.

australopithecine (os-tra-loh-pith'-e-seen) The colloquial name for members of the genus *Australopithecus*. The term was first used as a subfamily designation, but it's now most commonly used informally.

autonomic Pertaining to physiological responses not under voluntary control. An example in chimpanzees would be the erection of body hair during excitement. Blushing is a human example. Both responses convey information regarding emotional states, but neither is deliberate and communication isn't intended.

autosomes All chromosomes except the sex chromosomes.

Aztecs Militaristic people who dominated the Valley of Mexico and surrounding area at the time of the European conquest.

Bandkeramik Literally, "lined pottery"; refers to a Neolithic ceramic ware widely encountered in central Europe and to the culture that produced it.

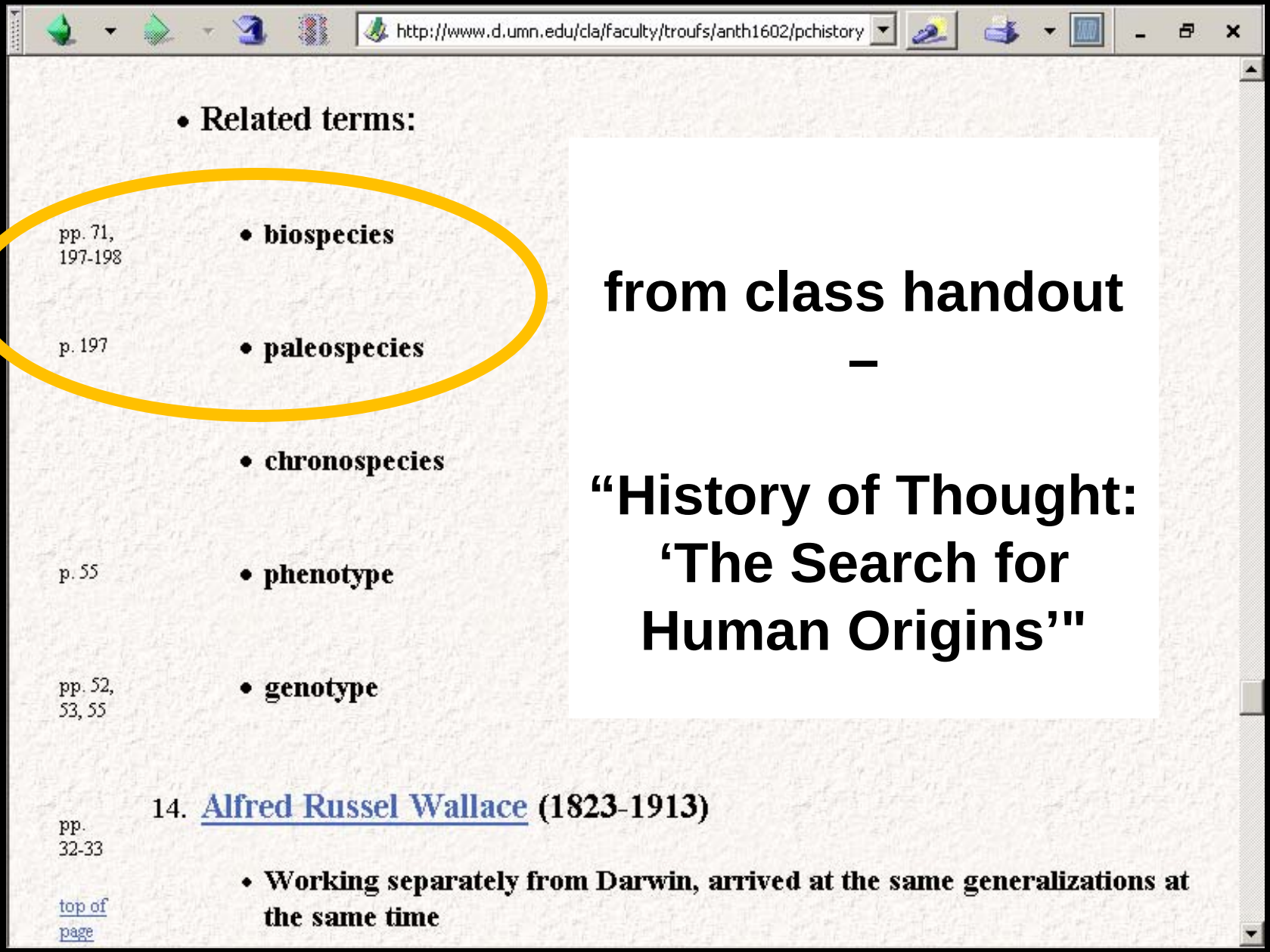
behavior Anything organisms do that involves action in response to internal or external stimuli; the response of an individual, group, or species to its environment. Such responses may or may not be deliberate,

. . . and other terms introduced in class

biospecies

paleospecies

terms / concepts



from class handout

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“History of Thought: ‘The Search for Human Origins’"

the internet: Texas A&M

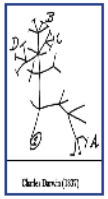
http://anthropology.tamu.edu/news/

CxlV v0.80pre1

Venus of Willendorf
Austria

Welcome to the Prehistoric Cultures Forum

This discussion forum supplements the classroom work for Anth 1602 Prehistoric Cultures. It primarily provides an interactive discussion bulletin board for students registered for this course at The University of Minnesota, Duluth, but visitors are more than welcome to join in the discussions.



Have a look at the responses posted Spring Quarter '98 in **a similar forum discussion**, "The Revolutions and the Humanities Forum," in Tom Bacig's Revolutions and the Humanities course.

This forum is moderated by Tim Roufs.

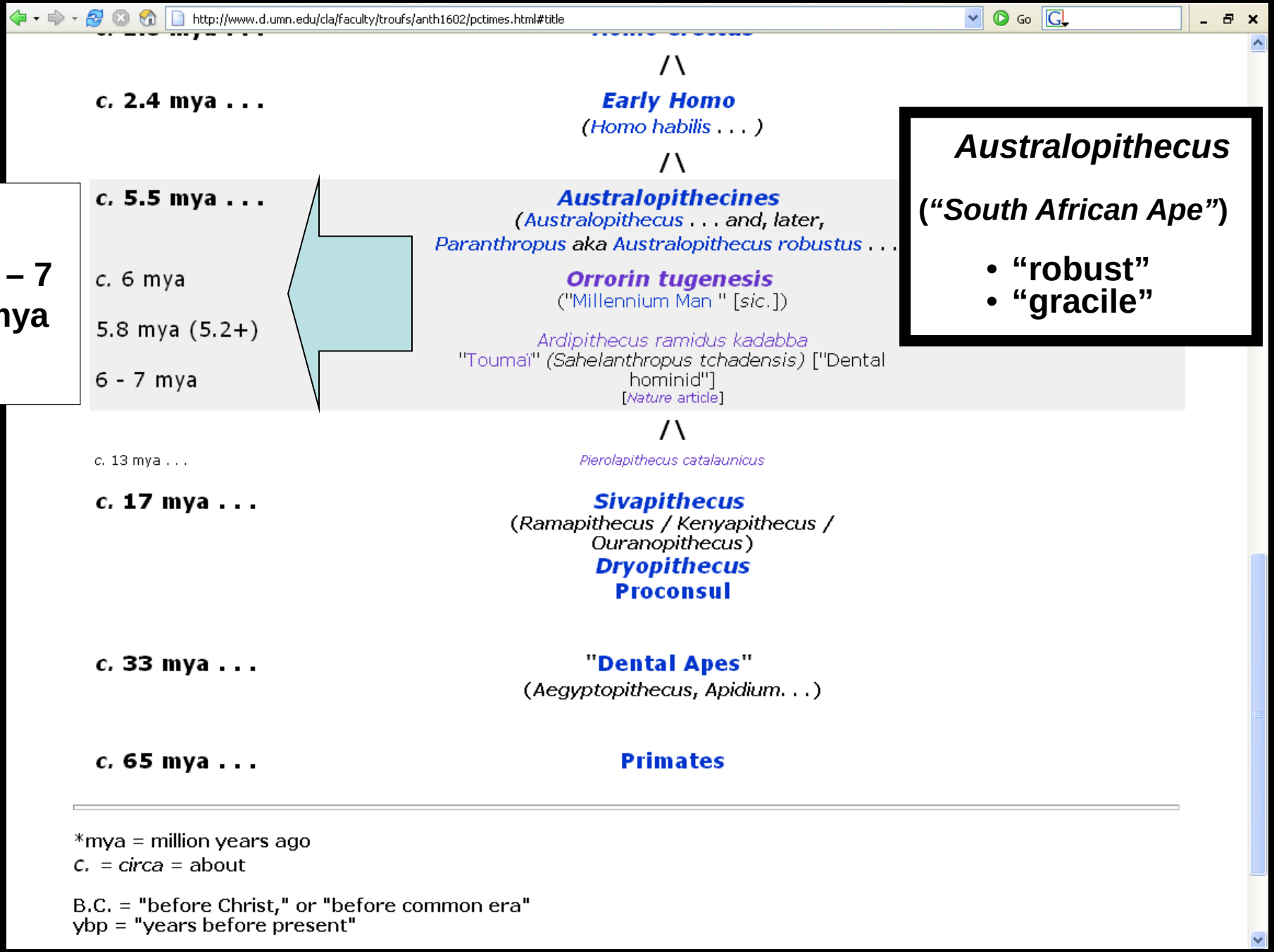
start | Adobe Dreamweaver ... | pc-03A | pc-03B [Compatibility ... | main_char_anth_MA.... | Inbox for troufs@d.u... | 5 Firefox | 8:42 PM

www.d.umn.edu/~troufs/PCforum/

individual fossils

know major finds, according to *group* type

- early on that means the basic *type* of find
  - e.g., *Australopithecus* (“South African ape”)



http://www.d.umn.edu/cla/faculty/troufs/anth1602/pctimes.html

individual fossils

know major finds, according to *group* type

- early on that means the basic *type* of find
  - e.g., *Australopithecus* ("South African ape")
- later it means keeping track of the *genus*
  - e.g., "*Australopithecus*"

[BBC article]

/\

***c.* 200,000 B.P. . . .** [or *c.* 300,000 ybp?]	**"*Homo sapiens neandertalensis*** **(Neandertals = special case "Archaic" or separate species?)**	**Archaic *Homo sapiens***
***c.* 0.4 mya . . .**	***Homo sapiens steinheimensis***	

/\

***c.* 1.8 mya . . .**	***Homo erectus***	

/\

***c.* 2.4 mya . . .**	***Early Homo*** ***(Homo habilis . . .)***	

/\

***c.* 5.5 mya . . .**	***Australopithecines*** ***(Aust[illegible]lopithecus . . . and, later, Paranthropus aka Australopithecus robustus . . .)***	
c. 6 mya	***Orrorin tugenesis*** ("Millennium Man " [*sic.*])	**"Early Hominids"**
5.8 mya (5.2+)	*Ardipithecus ramidus kadabba*	
6 - 7 mya	"Toumaï" *(Sahelanthropus tchadensis)* ["Dental hominid"] [*Nature* article]	

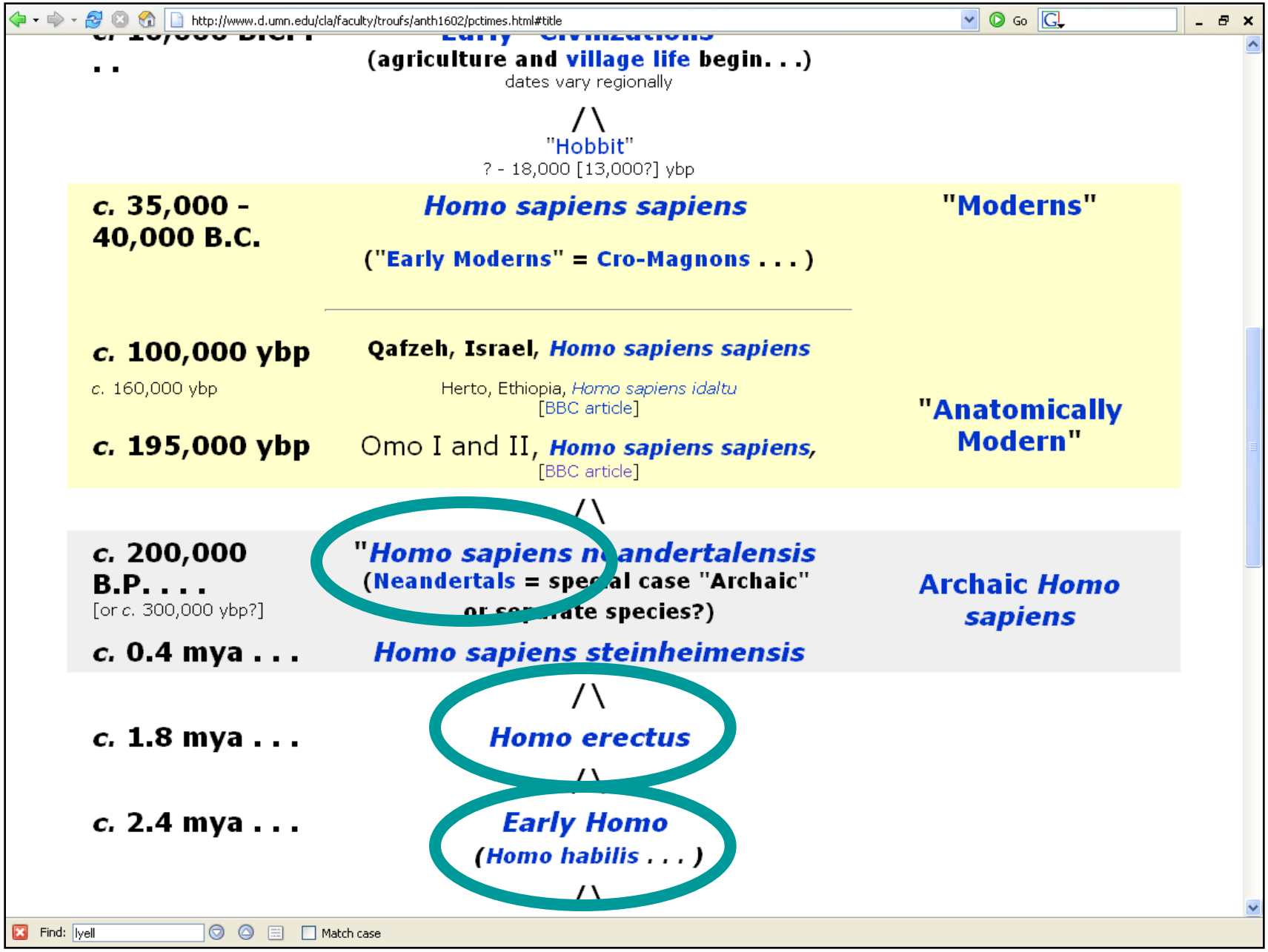
/\

c. 13 mya . . .	*Pierolapithecus catalaunicus*	
***c.* 17 mya . . .**	***Sivapithecus***	

individual fossils

know major finds, according to *group* type

- early on that means the basic *type* of find
  - e.g., *Australopithecus* ("South African ape")
- later it means keeping track of the *genus*
  - e.g., "Early *Homo*"
- toward the end (Chs. 10 - 16) that means keeping track of the *species*
  - e.g., *Homo habilis, Homo erectus, Homo sapiens*


http://www.d.umn.edu/cla/faculty/troufs/anth1602/pctimes.html#title
Go
. .
(agriculture and village life begin. . .)
dates vary regionally
/\
"Hobbit"
? - 18,000 [13,000?] ybp
c. 35,000 - 40,000 B.C.
Homo sapiens sapiens
("Early Moderns" = Cro-Magnons . . .)
"Moderns"
c. 100,000 ybp
Qafzeh, Israel, Homo sapiens sapiens
c. 160,000 ybp
Herto, Ethiopia, Homo sapiens idaltu
[BBC article]
c. 195,000 ybp
Omo I and II, Homo sapiens sapiens,
[BBC article]
"Anatomically Modern"
/\
c. 200,000 B.P. . . .
[or c. 300,000 ybp?]
"Homo sapiens neandertalensis
(Neandertals = special case "Archaic"
or separate species?)
Archaic Homo sapiens
c. 0.4 mya . . .
Homo sapiens steinheimensis
/\
c. 1.8 mya . . .
Homo erectus
/\
c. 2.4 mya . . .
Early Homo
(Homo habilis . . .)
/\
Find: lyell
Match case

important individual fossils will be discussed in class

throughout the semester keep track of the major areas of change

- bipedal walking
- stereoscopic vision
- grasping hand
- brain development . . .

major areas of change

- tool manufacture
- hunting
- art and ritual
- agriculture
- language and speech

major areas of change

- other cultural adaptations
  - development of civilization
  - . . .

archaeological sites ?

– **names . . .**

– **locations . . .**

– **contents . . .**

know major archaeological sites

- **Olduvai . . .**
- **Laetoli . . .**
- **Hadar . . .**
- **Sterkfonein . . .**
- **Afar . . .**

	Site	Dates (mya)	Hominids
East Africa	Middle Awash (Ethiopia; five localities)	5.8–5.2	*Ardipithecus*
	Aramis (Ethiopia)	4.4	*Ardipithecus ramidus*
	Tugen Hills	~6.0	*Orrorin tugenensis*
Central Africa	Toros-Menalla	~7.0	*Sahelanthropus tchadenis*

p. 216, Ch. 9

“At a Glance”

AT A GLANCE

Key Middle Pleistocene Premodern Human (*H. heidelbergensis*) Fossils from Europe

Site	Dates (ya)	Human Remains
Arago (Tautavel) (France)	400,000–300,000; date uncertain	Face; parietal perhaps from same person; many cranial fragments; up to 23 individuals represented
Atapuerca (Sima de los Huesos, northern Spain)	320,000–190,000, probably 300,000	Minimum of 28 individuals, including some nearly complete crania
Steinheim (Germany)	300,000–250,000; date uncertain	Nearly complete skull, lacking mandible
Swanscombe (England)	300,000–250,000; date uncertain	Occipital and parietals

p. 261, Ch. 11

“At a Glance”

AT A GLANCE

Key Neandertal Fossil Discoveries

Site	Dates (ya)	Human Remains
Vindija (Croatia)	42,000–28,000	35 specimens; almost entirely cranial fragments
La Chapelle (France)	50,000	Nearly complete adult male skeleton
Shanidar (Iraq)	70,000–60,000	9 individuals (partial skeletons)
Tabun (Israel)	110,000 date uncertain	2 (perhaps 3) individuals, including almost complete skeleton of adult female
Krapina (Croatia)	125,000–120,000	Up to 40 individuals, but very fragmentary

p. 273, Ch. 11

“At a Glance”

AT A GLANCE

Key Early Modern *Homo sapiens* Discoveries from Africa and the Near East

Site	Dates (ya)	Human Remains
Qafzeh (Israel)	110,000	Minimum of 20 individuals (*H. sapiens sapiens*)
Skhūl (Israel)	115,000	Minimum of 10 individuals (*H. sapiens sapiens*)
Klasies River Mouth (South Africa)	120,000?	Several individuals; highly fragmentary (*H. sapiens sapiens*)
Herto (Ethiopia)	160,000–154,000	Dental and cranial remains of 4 individuals (*H. sapiens idaltu*)

p. 291, Ch. 12

“At a Glance”

AT A GLANCE

North American Paleo-Indian Cultures

Site	Dates (ya)	Comments
Clovis	13,500–13,000	Earliest universally acknowledged Late Pleistocene hunter-gatherers who occupied much of North America below the glacial ice masses of the northern latitudes; used distinctive fluted spear or dart projectile points
Folsom	c. 12,000	Late Pleistocene hunter-gatherers who hunted now-extinct giant long-horned bison in the American Southwest
Plano	11,000–9,000	Hunter-gatherers of the Great Plains; their unfluted spear or dart points are associated only with modern fauna

p. 330, Ch. 13

“At a Glance”

AT A GLANCE

Important Near Eastern Sites and Regions

Site	Dates (ya)	Comments
Abu Hureya (Syria)	11,500–11,000	Hunter-gatherer settlement in which the economy was supplemented by domesticated plants, especially rye
Kebara & El Wad (Israel)	c. 10,000	Sites where hunter-gatherers supplemented their diet by harvesting the wild ancestral varieties of wheat and barley
Jericho (West Bank)	<11,000–3,500	Early permanent and sedentary community in the Levant that began in Natufian times and was occupied throughout the Neolithic

p. 364, Ch. 14

“At a Glance”

AT A GLANCE

Important North American Sites and Regions

Site	Dates (ya)	Comments
Las Colinas and **Snaketown** (Arizona)	1,000	Hohokam sites in the American Southwest that show ties to Mexican centers of domestications and culture
Chaco Canyon (New Mexico)	1,150–750	Region that contains several important Anasazi sites, many of which are characterized by monumental public and ceremonial architecture; now part of the Chaco Culture National Historical Park
Pueblo Bonito (New Mexico)	1050–825	This multistory building comprised approximately 600 rooms and was the primary town of Chaco Canyon
Cowboy Wash (Colorado)	c. 800	Recent excavations at this small village in the Four Corners region revealed possible evidence of cannibalism in human coprolites (preserved feces).
Mesa Verde (Colorado)	1,400–700	Anasazi sites, most widely known for their well-preserved "cliff dwellings"; forms Mesa Verde National Park
Cahokia (Illinois)	1,200–600	Large Mississippian town in the American Bottom region of west-central Illinois; Monks Mound is the largest prehistoric earthwork in the United States and Canada

p. 377, Ch. 14

"At a Glance"

AT A GLANCE — Important Near Eastern Sites and Regions

Site	Dates (ya)	Comments
Çatalhöyük (Turkey)	c. 9,000	A large Neolithic village with 5,000–8,000 inhabitants in south-central Turkey
Uruk (Iraq)	c. 5,500–1,800	Earliest true city; associated with the Sumerian civilization of the southern Tigris-Euphrates valleys
Ur (Iraq)	c. 4,600–2,500	City in southern Iraq; its cemetery of >1,800 graves includes 16 "royal" tombs

p. 399, Ch. 15

"At a Glance"

AT A GLANCE

Important Asian Sites and Regions

Site	Dates (ya)	Comments
Mohenjo-Daro (Pakistan)	c. 4,600–3,900	Most extensively excavated Indus civilization city, located in the Indus Valley of south-central Pakistan
Harappa (Pakistan)	c. 4,600–3,90	Indus civilization city in northeastern Pakistan
Erlitou (China)	c. 4,000	Elaborate site in northern China associated with the earliest phase of civilization
Shixianggou (China)	3,600–3,046	Capital city of the early Shang dynasty
Zhengzhou (China)	3,600–3,046	Early Shang capital city near the modern city of the same name
Shi Huangdi Tomb (China)	2,200	The Qin ruler Shi Huangdi was the first emperor of China. His mausoleum, which includes an entire terracotta army, is at Mount Li, which lies about 15 miles east of the city of Xian.

p. 406, Ch. 15

“At a Glance”

AT A GLANCE

Important Lowland Mesoamerica Sites and Regions

Site	Dates (ya)	Comments
Palenque (Mexico)	c. 1,300–1,100	Classic Maya center located on the edge of the Gulf Coast lowlands in Chiapas
San Lorenzo (Mexico)	3,150–2,900	Olmec civic-ceremonial center in southern Veracruz
La Venta (Mexico)	c. 2,800–2,400	Large Olmec civic-ceremonial center in the coastal lowlands of Tabasco
San Andrés (Mexico)	2,650	Olmec site near La Venta that recently yielded a cylinder seal with early evidence of writing in the Gulf Coast Lowlands. (San Andrés was also cited in Chapter 14 for the discovery of ancient maize pollen in a soil core pulled from pre-Olmec contexts.)
Uaxactún (Guatemala)	1,500–1,000	Occupied for a long time, this Maya center in the Petén region flourished during the Classic period.
Cerén (El Salvador)	c. 1,400	Maya village buried by the eruption of a volcano; provides a Pompeii-like snapshot of Classic period Maya life
Copán (Honduras)	c. 1,600–1,200	Major Maya city in western Honduras with an estimated population of around 27,000 at its peak
Naj Tunich (Guatemala)	c. 1,750–1,450	A sacred cave in the Petén region that has furnished invaluable new information about Maya art, writing, and religious life
Tikal (Guatemala)	c. 2,200–1,100	Major Maya center in the Petén of northern Guatemala

p. 412, Ch. 15 “At a Glance”

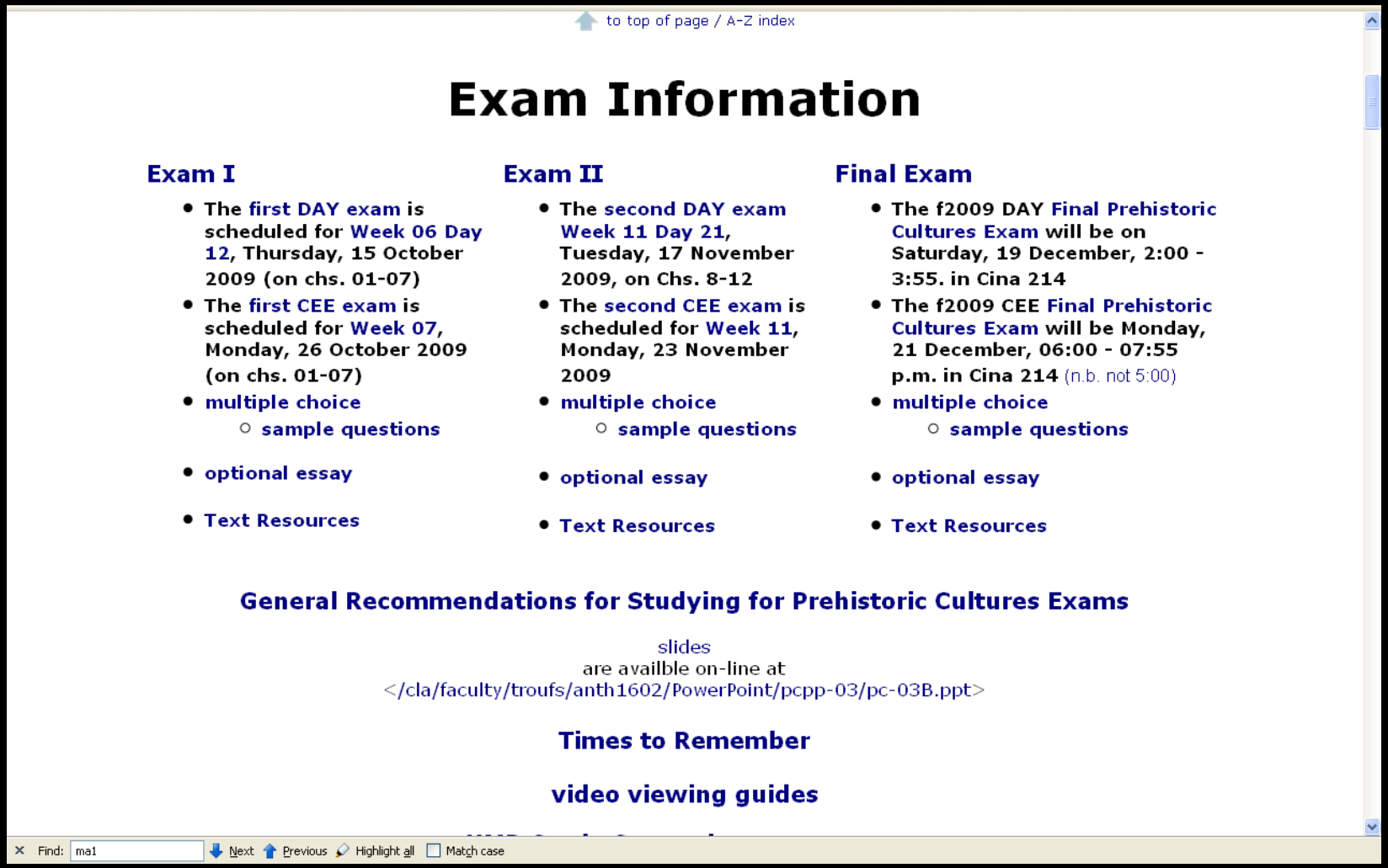
AT A GLANCE — Important Highland Mesoamerican Sites and Regions

Site	Dates (ya)	Comments
Teotihuacán (Mexico)	c. 2,200–1,350	Earliest city-state to dominate the Valley of Mexico, it became one of the largest urban centers in the New World up to the nineteenth century.
Cuicuilco (Mexico)	c. 2,300–2,000	Important early center in the Valley of Mexico; its destruction by a lava flow made it easier for Teotihuacán to take control of the Valley
Kaminaljuyú (Guatemala)	c. 3,000–1,100	Major Maya site located on the outskirts of Guatemala City; similarities of its elaborate tombs and architecture are often cited as evidence of the far-flung influence of Teotihuacán
Tula (Mexico)	c. 1,200–850	Totlec capital in the Valley of Mexico
Chichén Itzá and **Mayapán** (Mexico)	c. 1,100–600	Postclassic Maya centers in the lowlands of northern Yucatán
Tenochtitlán (Mexico)	c. 675–480	Aztec capital city in the Valley of Mexico

p. 417, Ch. 15

“At a Glance”

sample exam questions



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Exam Information

Exam I

- The first DAY exam is scheduled for Week 06 Day 12, Thursday, 15 October 2009 (on chs. 01-07)
- The first CEE exam is scheduled for Week 07, Monday, 26 October 2009 (on chs. 01-07)
- multiple choice
  - sample questions
- optional essay
- Text Resources

Exam II

- The second DAY exam Week 11 Day 21, Tuesday, 17 November 2009, on Chs. 8-12
- The second CEE exam is scheduled for Week 11, Monday, 23 November 2009
- multiple choice
  - sample questions
- optional essay
- Text Resources

Final Exam

- The f2009 DAY Final Prehistoric Cultures Exam will be on Saturday, 19 December, 2:00 - 3:55. in Cina 214
- The f2009 CEE Final Prehistoric Cultures Exam will be Monday, 21 December, 06:00 - 07:55 p.m. in Cina 214 (n.b. not 5:00)
- multiple choice
  - sample questions
- optional essay
- Text Resources

General Recommendations for Studying for Prehistoric Cultures Exams

slides
are availble on-line at
</cla/faculty/troufs/anth1602/PowerPoint/pcpp-03/pc-03B.ppt>

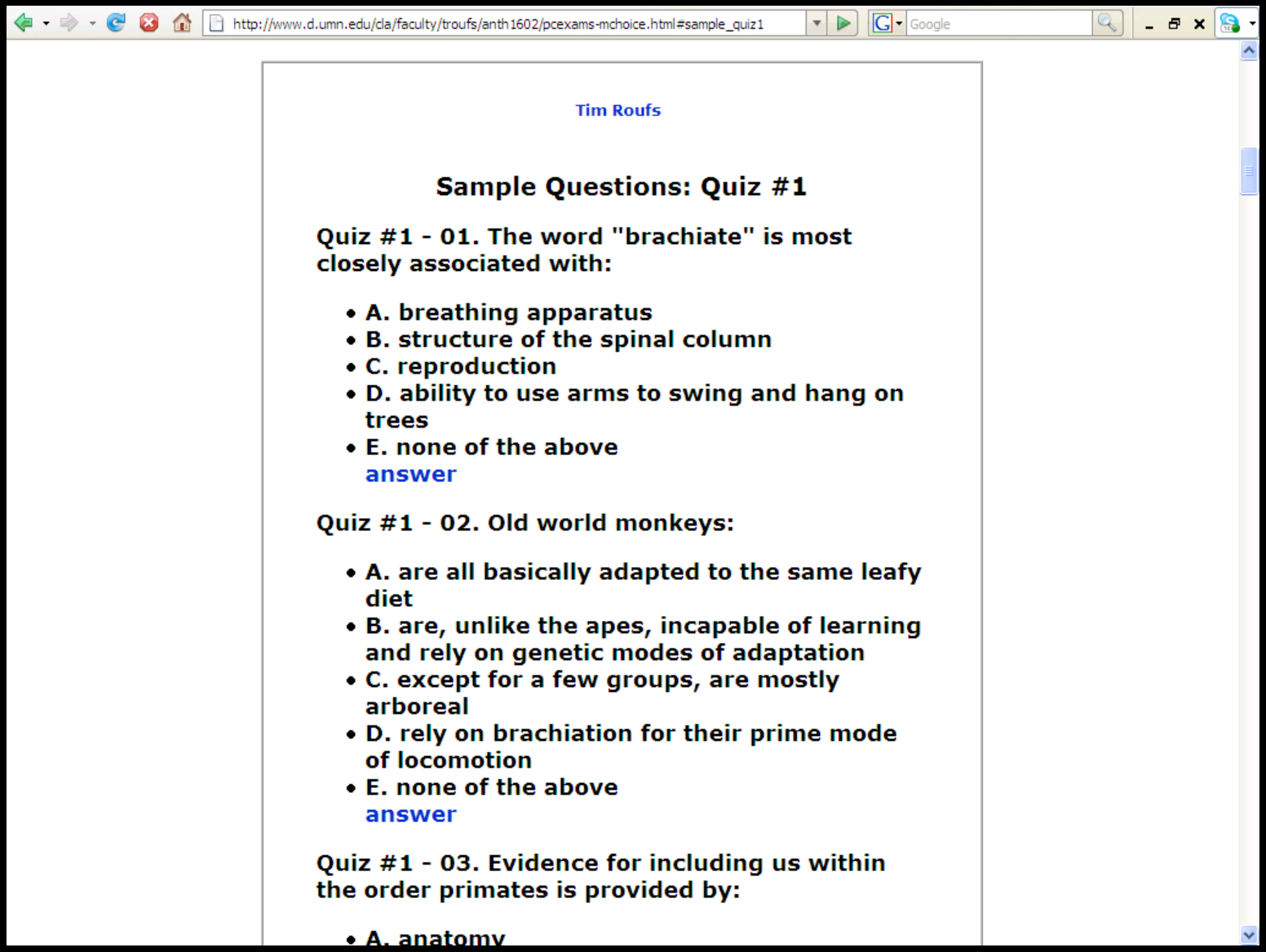
Times to Remember

video viewing guides

Find: ma1 Next Previous Highlight all Match case

http://www.d.umn.edu/cla/faculty/troufs/anth1602/pcexams.html

sample exam questions



http://www.d.umn.edu/cla/faculty/troufs/anth1602/pcexams-mchoice.html#sample_quiz1

in-class videos and films -- CEE

Week	Day	No.	Title
01	Monday 14 Sept. 2009	VC 1290	***Yanomamö: A Multidisciplinary Study*** (45 min., 1970) Controversy: *Darkness in El Dorado*
02	Monday 21 Sept. 2009	DVD 1015	***The Search for Adam*** (51 min., 2005)
03	Monday 28 Sept. 2009	DVD 742	***Journey of Man*** . . . (120 min., 2003)
04	Monday 5 Oct. 2009	VC 802	***Monkey, Ape and Man*** (49 min., 1971)
05	Monday 12 Oct. 2009	VC 806	***Among the Wild Chimpanzees*** (58 min., 1984)
06	Monday 19 Oct. 2009	DVD 1150	***The Last Great Ape*** (56 min., 2007)

Find: ma1 Next Previous Highlight all Match case

www.d.umn.edu/cla/faculty/troufs/anth1602/pcvideo_schedule_CEE.html#title

in-class videos and films

YANOMAMO INTERACTIVE CD/ROM
(Peter Biella, Napoleon A. Chagnon and Gary Seaman)

to top of page / A-Z index

Yanomamö: A Multidisciplinary Study

(45 min., 1970, VC 1290)

"A film study showing a multi-disciplinary research team doing field work in human population genetics among the Yanomamo Indians in Southern Venezuela. One half of the film is purely ethnographic; the other half of the film records the scientific research undertaking." -- DER

"Darkness in El Dorado"

Yanomamö Youth

Find: slide Next Previous Highlight all Match case

http://www.d.umn.edu/cla/faculty/troufs/anth1602/pcvideo_schedule.html

in-class videos and films

YANOMAMO INTERACTIVE CD/ROM
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"Darkness in El Dorado"

Yanomamö Youth

Abstract | Terms / Concepts | Notes

Cultures | Individuals | Bibliography

Search for *Yanomamö* on JSTOR

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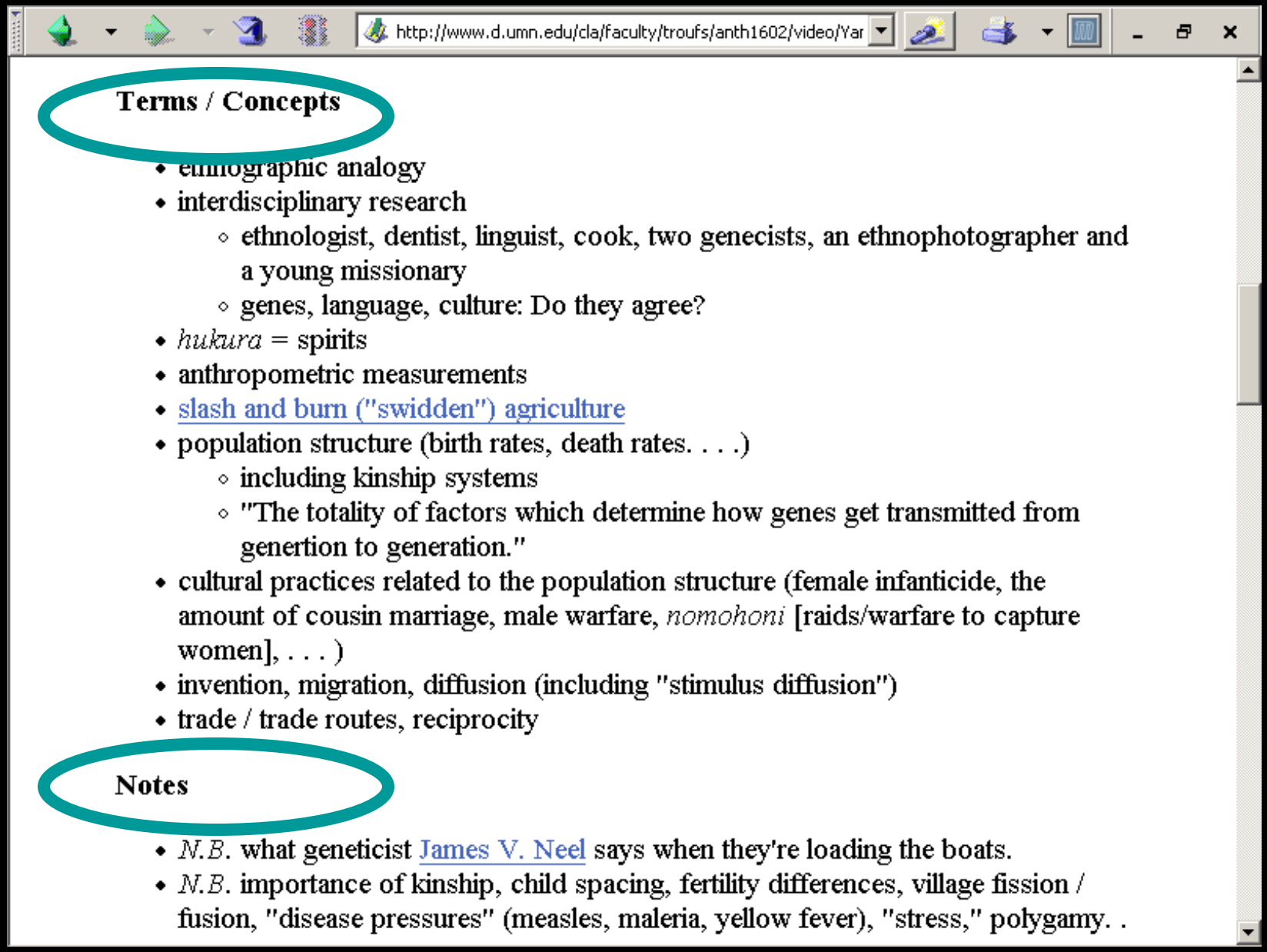
Find: slide Next Previous Highlight all Match case

http://www.d.umn.edu/cla/faculty/troufs/anth1602/pcvideo_schedule.html

in-class videos and films



Terms / Concepts

- ethnographic analogy
- interdisciplinary research
  - ethnologist, dentist, linguist, cook, two genecists, an ethnophotographer and a young missionary
  - genes, language, culture: Do they agree?
- *hukura* = spirits
- anthropometric measurements
- slash and burn ("swidden") agriculture
- population structure (birth rates, death rates. . . .)
  - including kinship systems
  - "The totality of factors which determine how genes get transmitted from genertion to generation."
- cultural practices related to the population structure (female infanticide, the amount of cousin marriage, male warfare, *nomohoni* [raids/warfare to capture women], . . .)
- invention, migration, diffusion (including "stimulus diffusion")
- trade / trade routes, reciprocity

Notes

- *N.B.* what geneticist James V. Neel says when they're loading the boats.
- *N.B.* importance of kinship, child spacing, fertility differences, village fission / fusion, "disease pressures" (measles, maleria, yellow fever), "stress," polygamy. .

http://www.d.umn.edu/cla/faculty/troufs/anth1602/pcvideo_schedule.html

studying from the text

don't forget

to have a look

at

the Glossary items

on pp. 441- 450

GLOSSARY

acclimatization Physiological responses to changes in the environment that occur during an individual's lifetime. Such responses may be temporary or permanent, depending on the duration of the environmental change and when in the individual's life it occurs. The *capacity* for acclimatization may typify an entire species or population, and because it is under genetic influence, it is subject to evolutionary factors such as natural selection or genetic drift.

Acheulian (ash'-oo-lay-en) Pertaining to a stone tool industry from the Lower and Middle Pleistocene; characterized by a large proportion of bifacial tools (flaked on both sides). Acheulian tool kits are very common in Africa, Southwest Asia, and western Europe, but they're thought to be less common elsewhere. Also spelled *Acheulean*.

adaptation Functional response of organisms or populations to the environment. Adaptation results from evolutionary change (specifically, as a result of natural selection).

adaptive niche The entire way of life of an organism: where it lives, what it eats, how it gets food, how it avoids predators, and so on.

adaptive radiation The relatively rapid expansion and diversification of life-forms into new ecological niches.

affiliative Pertaining to amicable associations between individuals. Affiliative behaviors, such as grooming, reinforce social bonds and promote group cohesion.

agriculture Cultural activities associated with planting, herding, and processing domesticated species; farming.

allele frequency In a population, the percentage of all the alleles at a locus accounted for by one specific allele.

alleles Alternate forms of a gene. Alleles occur at the same locus on paired chromosomes and thus govern the same trait. However, because they are different, their action may result in different expressions of that trait. The term *allele* is often used synonymously with *gene*.

alluvial Deposited by streams, usually during flood stages.

altruism Behavior that benefits another individual but at some potential risk or cost to oneself.

amino acids Small molecules that are the components of proteins.

analogies Similarities between organisms based strictly on common function, with no assumed common evolutionary descent.

Anasazi (an-ah-saw'-zee) Ancient culture of the southwestern United States, associated with preserved cliff dwellings and masonry pueblo sites.

ancestral (primitive) Referring to characters inherited by a group of organisms from a remote ancestor and thus not diagnostic of groups (lineages) that diverged after the character first appeared.

anthropoids Members of a suborder of Primates, the *Anthropoidea* (pronounced "ann-throw-poid'-ee-uh"). Traditionally, the suborder includes monkeys, apes, and humans.

anthropology The field of inquiry that studies human culture and evolutionary aspects of human biology; includes cultural anthropology, archaeology, linguistics, and physical anthropology.

anthropometry Measurement of human body parts. When osteologists measure skeletal elements, the term *osteometry* is often used.

anthropomorphic (*anthro*, meaning "man," and *morph*, meaning "shape") Having or being given humanlike characteristics.

antigens Large molecules found on the surface of cells. Several different loci governing antigens on red and white blood cells are known. (Foreign antigens provoke an immune response in individuals.)

antiquarian Relating to an interest in things and texts of the past.

arboreal Tree-living; adapted to life in the trees.

arboreal hypothesis The traditional view that primate characteristics can be explained as a consequence of primate diversification into arboreal habitats.

archaeobotany The analysis and interpretation of the remains of ancient plants recovered from the archaeological record.

Archaic North American archaeological period that follows the end of the last Ice Age and traditionally ends with the beginning of the use of ceramics; equivalent to the Mesolithic in the Old World.

argon-argon ($^{40}Ar/^{39}Ar$) method Working on a similar basis as the potassium-argon method, this approach uses the ratio of argon-40 to argon-39 for dating igneous and metamorphic rocks; it offers precision and temporal range advantages for dating some early hominid sites.

artifacts Objects or materials made or modified for use by hominids. The earliest artifacts tend to be tools made of stone or, occasionally, bone.

Atahuallpa (at-a-wall'-pah) Inka leader defeated by Pizarro.

Athabaskan Largest Native American language family in North America; includes more than 35 languages spoken in western North America.

Aurignacian Pertaining to an Upper Paleolithic stone tool industry in Europe beginning at about 40,000 ya.

aurochs European wild oxen, ancestral to domesticated cattle.

australopithecine (os-tra-loh-pith'-e-seen) The colloquial name for members of the genus *Australopithecus*. The term was first used as a subfamily designation, but it's now most commonly used informally.

autonomic Pertaining to physiological responses not under voluntary control. An example in chimpanzees would be the erection of body hair during excitement. Blushing is a human example. Both responses convey information regarding emotional states, but neither is deliberate and communication isn't intended.

autosomes All chromosomes except the sex chromosomes.

Aztecs Militaristic people who dominated the Valley of Mexico and surrounding area at the time of the European conquest.

Bandkeramik Literally, "lined pottery"; refers to a Neolithic ceramic ware widely encountered in central Europe and to the culture that produced it.

behavior Anything organisms do that involves action in response to internal or external stimuli; the response of an individual, group, or species to its environment. Such responses may or may not be deliberate,

text Index

also

have a look at

the Index,

pp. 475-489

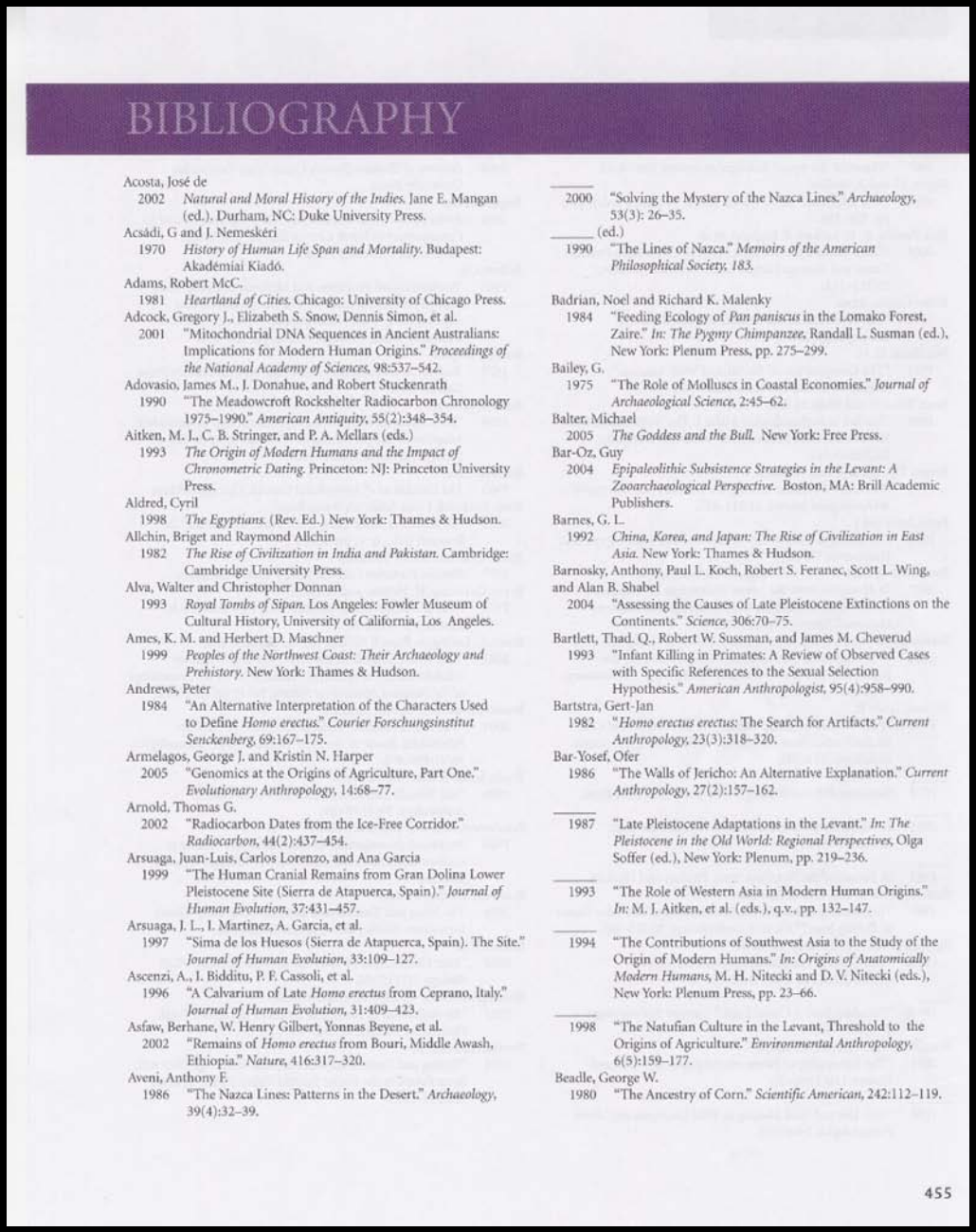
INDEX

f denotes figures, illustrations, tables, and photos

text bibliography

and

have a look at the Bibliography, pp. 451-472



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