

3.986 - Introduction to Archaeology

Societal Collapse - Additional Notes - Maya

Decline of the Classic Maya

Between 700 - 900 AD many of the elite features disappear from the archaeological record - happens in different ways at slightly different times.

- no calendrical inscriptions (last known long count calendrical date - 909 AD)
 - no stelae
 - stop construction of monumental buildings
 - stop production of polychrome pottery
- by 1000 AD all these activities had ceased in the southern lowlands.

Examples:

Seibal

First site on southwestern periphery to display new intrusive pottery types. New physical types appear on stelae - at ca. 790 AD. Possibility of intrusion of other western lowland Mayan speakers - the Chontal.

Tikal

730 - 830 AD - enormous increase in building - temples
90% of the house mounds around the center were occupied during this period -
50 to 80,000 population estimated

830 - 900 AD - rapid contraction and population loss
no monumental building activity
last long count monument at Tikal: 889 AD
50-60% of the house mounds abandoned

Lamanai

in coastal area of Belize, no disruptions of the population apparent, but classic Maya traits disappear ca. 900 AD.

In some other places

- violent destruction of monuments
- mass burials
- some evidence of foreign intrusion - at other places not.

Possible explanations for patterns

environmental changes no doubt involved in complex ways
over centralization of power and economy accompanied by environmental degradation - (a popular view)
leading to

- 1) religious crisis
- 2) foreign invasions - evident in southwest
- 3) peasant revolt - internal revolt at Altun Ha?
- 4) breakdown of trade
- 5) agricultural failure - over exploitation of environment, over population of region
- 6) predisposition for collapse- cyclic nature of calendar - doomsday scenario -self-fulfilling prophecy
See: Puelston, D. 1976. An epistemological pathology and the collapse--or why the Maya kept the short count. In *Maya Archaeology and Ethnohistory*, (eds.) N. Hammond and G. Willey, Austin: University of Texas Press, pp. 187-215.
- 7) regional environmental disasters

Possible evidence

- 1) some evidence for “over-population” given “slash and burn” carrying capacities, as many as 300 people per km²
- 2) evidence for nutritional deprivation among commoners relative to elite
- 3) increasing evidence of warfare between centers
may be deliberate attempt to increase populations of individual centers to increase political power.
- 4) regional droughts, see **Haug, Gerald H. et al. 2003. Climate and the Collapse of Maya Civilization. *Science* 299:1731-35 (14 March 2003)**

Societal Collapse - Additional Notes - Near East

Decline of ancient Sumer

See attached culture-historic and political history for a general overview

Leading potential factors:

- 1 anthropogenically induced environmental degradation -
Gibson, M. 1974. Violation of fallow and engineered disaster in Mesopotamian civilization. In T. Downing and M. Gibson (eds.) *Irrigation's Impact on Society*. University of Arizona, Anthropological Papers no. 25: pp. 7-20.
- 2 long term climate change and environmental disasters
Jacobsen, T and R. McC. Adams 1958. Salt and silt in ancient Mesopotamian agriculture. *Science* 128:1251-58.
Weiss, H. and R. S. Bradley 2001. Archaeology: what drives societal collapse? *Science* 291, (5504) pp. 609-610.
Weiss, H. et al. 1993. The genesis and collapse of third millennium north Mesopotamian civilization. *Science* 261:995-1004.
- 3 externally and internally generated political destabilization
See attached culture-historic and political history
- 4 trade and economic destabilization
see Gibson, M. 1974 above
Postgate, N. 1992. *Early Mesopotamia: society and economy at the dawn of history*. London: Routledge. p.180-181.

Comments and Abstracts re: long term climate change and environmental disasters

ARCHAEOLOGY: Sea-Floor Dust Shows Drought Felled Akkadian Empire

Richard A. Kerr *Science* Volume 279, Number 5349, Issue of 16 January 1998, p. 325:

SAN FRANCISCO--In 1993, a Yale archaeologist proposed that the Akkadian empire--which in 2300 B.C. was the first to subsume independent societies into a single state, only to splinter a century later--was brought low by a wide-ranging, centuries-long drought (*Science*, 20 August 1993, p. 985). At the annual fall meeting last month of the American Geophysical Union here, new evidence for this theory was presented from a sediment core retrieved from the bottom of the Gulf of Oman, 1800 kilometers from the heart of the Akkadian empire, indicating that a 300-year-long dry spell began just as the Akkadians' northern stronghold of Tell Leilan was being abandoned. The new results illustrate that climate change is emerging as a new and powerful causal agent in the evolution of civilization.

The genesis and collapse of third millennium north Mesopotamian civilization.

Weiss, H., M.-A. Courty, W. Wetterstrom, F. Guichard, L. Senior, R. Meadow and A. Curnow. *Science* 261(5124):995-1004. (Aug. 20, 1993)

Abstract: Archaeological and soil-stratigraphic data define the origin, growth, and collapse of Subir, the third millennium rain-fed agricultural civilization of northern Mesopotamia on the Habur Plains of Syria. At 2200 B.C., a marked increase in aridity and wind circulation, subsequent to a volcanic eruption, induced a considerable degradation of land-use conditions. After four centuries of urban life, this abrupt climatic change evidently caused abandonment of Tell Leilan, regional desertion, and collapse of the Akkadian empire based in southern Mesopotamia. Synchronous collapse in adjacent regions suggests that the impact of the abrupt climatic change was extensive.

3.986: The Human Past: Introduction Archaeology

Summary of the culture-historic and political history of lower Mesopotamia: Sumer (read from bottom up)

Babylonian kingdom (Old Babylonian)	±1,750 - 1,595 B.C.	Hammurabi reunites northern and southern Mesopotamia in the Babylonia empire (Sumer ceases to be an independent political force and gradually becomes a backwater)
small kingdoms	2,000 - 1,750 B.C.	period of small kingdoms dominated by Larsa and Isin
		political consolidation destroyed by Elamite (Susa) invasions from east, and Amorite pastoralist invasions from the western desert region.
3rd Dynasty of Ur	2,113 - 2,000 B.C.	political consolidation of Sumer and northern Mesopotamia under Ur-nammu of Ur
political instability	2,200 - 2,113 B.C.	period of anarchy in southern Mesopotamia. 21 kings in 91 years according to King lists.
Sargonid Period	2,371 - 2,200 B.C.	Akkadian empire destroyed by the Guti, a pastoral people from northern Zagros area Sargon of Agade (2371-2316 B.C.) of northern Mesopotamia conquers northern and southern Mesopotamia to create the first regional empire, known as the Akkadian empire.
	III 2,600 - 2,371 B.C.	regional consolidation under King of Umma, Lugal-zagge-si at end of period
Early Dynastic	II 2,750 - 2,600 B.C.	Elamite (Susa) - foreign domination for a short while at start of period
	I 3,000 - 2,750 B.C.	constant struggle for supremacy among city-states during all three periods, with shifting alliances and periodic conflicts