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Annotated bibliography  
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A bibliography is a list of sources that have been used for research purposes on a topic. Generally, a bibliography only includes the bibliographic information, such as the author, title, and publisher, among others. An annotation is a summary and/or evaluation of a piece of research. Therefore, an annotated bibliography includes a summary and/or evaluation of each source.

This annotated bibliography, consisting of summaries for 10 peer-reviewed scholarly sources, focuses on the following 2 periods of time: At the peak of the Maya Civilization, and during the gradual decline and eventual collapse of the Maya Civilization.

<https://scholar.google.ca/scholar?hl=en&as_sdt=0%2C5&q=The+collapse+of+mayan+civilization&btnG=>

Drought and the Maya:

1. Aimers, J., & Hodell, D. (2011). Drought and the Maya: the collapse of the Maya civilization is often attributed to drought, but is the explanation really as simple as that? On the basis of evidence from their respective fields, an archaeologist and a palaeoclimatologist call for a more nuanced assessment. *Nature*, *479*(7371), 44+. <https://link-gale-com.ezproxy.lakeheadu.ca/apps/doc/A272364688/AONE?u=ocul_lakehead&sid=bookmark-AONE&xid=c88698b6>

During the period known as the Terminal Classic (roughly A.D. 750 to 1050), archeological research on the Mayan Civilization has provided a wealth of information regarding a sharp decline and eventual collapse of the Maya civilization. Evidence to support this have ranged from political events and warfare to climate change and severe drought. The data itself was collected from monuments of conquest, human bone, fauna, and flora, dated via the radiocarbon dating using trace amounts of carbon 14. Interestingly, collapse may not be the correct term to describe the long process of Maya decline, as many similar civilizations experienced similar periods of growth and decline. Nevertheless, arguments derived from this information is a matter of debate because of the complexity of discovered archeological data. This summary is relevant to my project because the summary gives a brief description of the natural or human-driven mechanisms which could have contributed to the collapse of the Maya Civilization. Because I am focusing on a period in the Maya Civilization history where their population declined sharply and eventually collapsed, the referenced article has many important details for my project.

1. Dunning, N., & Beach, T., & Beach-Luzzadder, S. (2012). Kax and kol: Collapse and resilience in lowland Maya civilization. *PNAS,* 109(10) 3652-3657. <https://doi.org/10.1073/pnas.1114838109>

Particularly in the past 3 millennia, humans have bene the dominant driver of ecological change; sometimes manipulating the fate of the Maya Civilization. Since the 19th century, images of Ancient Maya have been associated with images of beautiful buildings in various states of decay, crumbing palaces, and vegetation-covered temples. These vague images have created countless arguments for the fate of the Classic Period in the Maya Civilization. Modern society today, like Maya, has many similar elements which serve as a warning for modern civilization: its large size, sophisticated urban culture, abandonment of many large areas, dwindling resources, and drastic changes in climate. In Mayan history, there are few examples of rapid depopulations similar to the one which ended the Maya Civilization, in contrast to the mass regional abandonment in the Terminal Classic, which played out at least 125 years. However, even those areas which did not experience abandonment eventually collapsed because of changes which brought on long-term population loss. At the heart of the Maya region centered around the Yucatán Peninsula and areas of Mexico and Central America, a region ranging from 40 to 300 metres in elevation is referred to as the elevated interior region (EIR). This region, in addition to being the centre of cultural development and great architecture, was the focus of mass collapse. Compared to the Maya communities centered in lowlands, those in elevated portions were more susceptible to collapse: lakes and water sources were few and far between and surface drainage was very slow and seasonally-dependent. In an elevated region with such little rainwater, and little-to-no groundwater, this would cause widespread droughts. Additionally, the Maya lowlands were subject to frequent hurricane strikes and forest fires over widespread areas, destroying large areas of resources such as crops and animals, or contaminating water sources. Much of the landscape of the EIR was tropical and dense forest cover, being well-suited to the agricultural system of the ancient Maya, but settlements still faced difficulties, especially as population density increased. Traditional Maya agriculture is highly adapted to the seasonal rhythms of regional precipitation. However, because the Maya lowlands experienced drying trends recurring on an apparent cycle, the shifts lead to increases in the frequency and severity of droughts. This summary of content is relevant to my project because the summary gives more of an in-depth explanation of the mechanisms which contributed to the collapse of the Mayan Civilization. Because I am focusing on a period in the Mayan Civilization history where their population declined sharply and eventually collapsed, the referenced article has many important details for my project.

1. Zeitlin, R. N. (1984). Archeology and volcanism in Central America. *Science*, *226*, 163+. <https://link-gale-com.ezproxy.lakeheadu.ca/apps/doc/A3472821/AONE?u=ocul_lakehead&sid=bookmark-AONE&xid=49347507>

As a starting point for archeological research into the ancient civilisations such as the Maya, studies were conducted in El Salvador starting in 1975; El Salvador was one of the main geographical regions where the Maya Civilization flourished. More specifically, one of the accomplishments of the project was to document the Holocene volcanic activity which, emitted by Mount Ilopango, wreaked havoc on a densely-populated area of Protoclassic Maya settlement. One of the most particularly catastrophic volcanic eruptions, occurring in A.D. 260, inspired much research into the change of human ecology as a result of the deep and widespread ash deposits following the volcanic eruption. To acquire the most accurate samples, the site of focus was an environmentally-diverse 546 square-kilometer area in the intermontane Zapotitan basin, 30 kilometers west of Ilopango, where geological sampling, settlement pattern surveys, and two archeological site excavations took place. Although modest in size and quality, the archeological material analyzed (soil, tephra deposits, ceramic remains, lithic artifacts, pollen, and fauna) are very informative about the past geological and cultural history of Maya Civilization in that region. Additionally, excavations at a Late Classic period household add some neat evidence about highland Maya life and material culture. Many Mesoamerican prehistorians agree that the lowland Maya culture did not flourish as a choice, instead being forced due to mass movement away from the culturally-important but volcano-ravaged lands of El Salvador, in the highland Maya. However, after 150- to 200- years post-eruption, rapid repopulation took place in El Salvador. In support of this, there is a seeming lack of human remains in the lowlands during the Protoclassic-Early Classic periods, followed by archaeological evidence of lowland-related pottery and stone tools at sites in the highlands, dating to the beginning of the Late Classic. The suggestion for this sudden repopulation is to re-establish trade and procurement networks, particularly for exotic trade goods such as polychrome pottery and obsidian. However, another theory suggested for the sudden repopulation of El Salvador following the volcanic eruption is part of a gradual, population-pressure-induced expansion of Maya agriculture. This summary is relevant to my project because the summary gives a brief description of several factors which may have contributed to the collapse of the Maya Civilization, most notably volcanic eruptions, and a boom in population increase. Because I am focusing on a period in the Maya Civilization history where their population declined sharply and eventually collapsed, the referenced article has many important details for my project.

**References**

1. Drought and the Maya: Aimers, J., & Hodell, D. (2011). Drought and the Maya: the collapse of the Maya civilization is often attributed to drought, but is the explanation really as simple as that? On the basis of evidence from their respective fields, an archaeologist and a palaeoclimatologist call for a more nuanced assessment. *Nature*, *479*(7371), 44+. <https://link-gale-com.ezproxy.lakeheadu.ca/apps/doc/A272364688/AONE?u=ocul_lakehead&sid=bookmark-AONE&xid=c88698b6>