JERICHO

ENDURANCE IN THE FERTILE CRESCENT

By Craig Benjamin, adapted by Newsela
Jericho, located in the West Bank region of the Middle East, is the oldest continuously inhabited city on the planet.
History and environment

Jericho’s 14,000-year survival is a direct result of biological and geological advantages. These advantages explain why a settlement was established there in the first place. This essay explores the idea that the history of a place is as much about its physical environment as it is about superior technology or government.

Big Historians, who are interested in the appearance and development of the first agrarian civilizations, ask probing questions:

What were the geographical and biological advantages of certain regions that made possible the appearance of the first towns and cities there?

What role did climate play in allowing for agrarian civilizations to appear in some regions, while others remained better suited for foraging?

Why is it that some agrarian civilizations seem to have abused their environments, and thus caused their own destruction, while others were able to responsibly benefit from the advantages provided by geography and biology and successfully sustain themselves for thousands of years?

The city of Jericho is a case study of the critical relationship between history and its environmental context. Jericho is the oldest city on the planet, situated today in the West Bank region of the Middle East. The location and long-term survival of the city is an excellent example of the impact of the environment on human history. The establishment of Jericho 14,000 years ago resulted from the same geographical and biological factors that led to the most significant revolution in all human history — the appearance of agriculture.

This transition was revolutionary. Consider the situation 15,000 years ago. Humans had occupied every continent on the globe except Antarctica. All humans, no matter where they lived, survived by foraging, also known as hunting and gathering. Humans were able to forage successfully in different environments, from the deserts of Australia to the Arctic ice. But foraging
bands were small, and few exchanges took place between them. This limited the amount of collective learning that went on.

But then something changed. Between 11,000 and 10,000 years ago, new ways of life and technologies associated with farming began to appear. Farming eventually gave humans access to more food and energy. Consequently, humans began to multiply more rapidly and live in larger communities like villages, towns, and eventually cities.

These developments led to an entirely new level of complexity in the human condition. The transition to agriculture was the first step in a cultural revolution that utterly transformed human societies and drove our species onto a path that led rapidly toward the astonishing complexity of the modern world. And one of the most significant steps in the early stages of that process was the emergence of large settlements like Uruk and Tenochtitlan — and Jericho.

To understand the history of Jericho, we first need to look at the role of climate change in encouraging humans to transition to farming. Then we need to consider the Natufian people, who were some of the first humans to adopt farming, and the first residents of early Jericho. Next we need to ask, why there? What geological and biological advantages allowed Jericho to survive for so long? We conclude with a closer look at events in Jericho.

The role of climate change

The climate change at the end of the last ice age is the most important factor that explains the transition to agriculture and the appearance of large settlements. The first evidence of farming appears after the end of the last ice age, in the Holocene epoch about 13,000 years ago.

Conditions were warmer and more stable. Entire landscapes were transformed. Forest spread across the steppes and large animals like mammoths and bison were pushed out. As herds of animals that humans had hunted for tens of thousands of years migrated northward, communities became dependent on smaller game like boar, deer, and rabbit, as well as on new root and seed plants.

These changes were especially notable in the Fertile Crescent, an arc of high ground that stretches north up the coast of the eastern Mediterranean Sea, east through the mountains of Turkey and northern Iraq, and then south along the high ground between Iraq and Iran. Across the Fertile Crescent, the change in climate encouraged the spread of small game and warmth-loving cereal grasses.

There was great abundance in regions with good supplies of water and where the local environment had plants and animals that could be domesticated. These areas attracted humans. We have evidence of numerous Stone Age foraging communities that were experimenting with these plants and animals. The most important of the groups attracted to the abundance of the Fertile Crescent was the Natufians.

Natufians and the “trap of sedentism”

Starting about 11,000 years ago, some human groups became less nomadic. They were sedentary at least part-time. This was caused by climate change and local population pressure.

The stable climates at the end of the ice age created areas of abundance where large numbers of humans were able to settle. These people were not farming, but living off the rich natural resources of the land.

Communities that gave up nomadism but still lived as foragers are called “affluent foragers,” or wealthy hunter-gatherers. They had enough resources to settle down and stay in one place.

The most important affluent foragers in the story of Jericho were the Natufian people, who began occupying the western Fertile Crescent (present-day Israel, Jordan, Lebanon, and Syria) just over 14,000 years ago.
The first evidence of Natufian culture was discovered in northern Israel in 1928 by Dorothy Garrod. The evidence was found at a place called Wadi en-Natuf. This is where the name “Natufian” comes from — we have no idea what they called themselves.

We do know that they lived in villages, harvested wild grains, and hunted gazelles. The Natufians hunted and gathered similarly to other groups of the time. But their use of stone sickle blades to harvest large quantities of wild cereal grains is evidence of a serious change in food-gathering practices. They also processed their grain more than anyone before. They built special mortars dug deep into the bedrock to grind their grain.

Natufian cemeteries also separate the group from others of the time. The cemeteries suggest more complex communities with leaders and social hierarchies. Some individuals were buried wearing personal ornaments like caps, bracelets and garters. These may have been indicators of their higher status. Only a small minority of Natufians was selected for ceremonial burial. This shows that Natufian society had more social levels than other early human communities. There is evidence that the Natufian diet consisted mainly of harvested and prepared cereal grains. Skeletal remains showed that most of the residents had suffered from rotten teeth as a result of eating too much barley and wheat.

At the Ain Mallaha site in Syria, we also see evidence that affluent foraging was leading to increasing populations. At this site, 200 to 300 people lived year round. This may seem tiny by today’s standards, but it may have been one of the largest human communities that had ever existed at the time. One of the most important effects of affluent foraging is that population pressure was forcing humans into smaller territories and denser settlements.

By 10,000 BCE, foragers had migrated to most parts of this region, and in some areas there was simply not enough room for them all to settle. Each group had to survive on smaller and smaller parcels of land. These communities found themselves in what has been called the “trap of sedentism.”

Traditional foraging ways are almost always nomadic. They require almost constant migration. Human communities had to keep populations small. It is impossible for migrating bands to support too many feeding infants or less mobile elderly members. In order to survive, these bands had to practice natural birth control. They also killed off unwanted infants and the elderly to keep populations sustainable.

But when groups like the Natufians decided to stay in one place, all this changed. There were no longer the same limits on population. Older members of the community did not have to be abandoned. More children could be supported. As a result, affluent foraging groups began to increase in size. This led to the problem of overpopulation.

Indeed, evidence found in Jordan shows that many Natufian sites experienced population pressure. There were simply too many mouths to feed by foraging.

Different groups tried increasingly desperate and environmentally unsustainable ways to increase food supplies. Many groups were forced to leave their settlements and try to survive elsewhere. At some sustainable sites, though, the inhabitants learned to domesticate plant and animal species. They began full-scale farming. Jericho was one of these sites.

The environmental advantages of Jericho’s site

The transition to farming ultimately led to the creation of larger settlements, until towns, cities, states, and empires appeared for the first time. But cities and states emerged only in a few regions where environmental factors made them possible.

Cities and states were not inevitable. Natural reasons allowed some villages to continue to grow until they become towns and cities.
There are many examples of villages that grew quite large. The reasons why are not always clear. Some may have been important religious centers. Others had access to a critical resource, such as a reliable water supply. Still, others became important trade centers.

Jericho has been sustainable because it benefited from several of these advantages, most importantly a very favorable environment.

Jericho is located in the Jordan River Valley in the West Bank. At 864 feet below sea level, Jericho is not only the oldest city on Earth but also the lowest one.

In the Judeo-Christian tradition, the city is well known as the place where the Israelites returned after their slavery in Egypt. According to the Bible, the walls of Jericho came crashing down after the Israelites unleashed the devastating sound of ram’s horn trumpets. But it is the natural walls surrounding Jericho that are of even greater importance.

The geological walls of Jericho were created by seismographic activity so intense that it tore a great rift in the Earth’s crust extending all the way from Palestine to northeastern Africa. Of course, the engine that drives plate tectonic movements like this is the heat trapped deep inside the planet. This heat can be traced back to the processes that created the Earth and Solar System in the first place, all the way back to the Big Bang itself.

Jericho lies deep in this Jordan Rift Valley, a tectonic feature formed by a fault along the boundary between the African and Arabian plates. Because of the fault between these two plates, the land dropped 3,000 feet, eventually settling almost 900 feet below sea level. At this astonishingly low elevation, Natufians established the settlement that became Jericho around 14,000 years ago.

But we still haven’t answered the question why. What attracted these affluent foragers to this particular location? Again, it is geography and biology that provide the answer.

The Jordan River is the only major water source that flows into the Dead Sea. Jericho is located just a couple of miles west of the river, about 10 miles north of the Dead Sea. The city is well protected by Mount Nebo to the east and the Central Mountains to the west. These geological features form natural defenses. Jericho’s location in central Palestine was also ideal for the control of trade and migration routes, which pass up and down this natural valley. Throughout the city’s long history, these geographic advantages have made it the target of a series of invaders who saw Jericho as the key to controlling Palestine.

Jericho had natural defenses and a favorable location. But its most significant environmental advantage was its access to reliable supplies of water. Water was essential for survival in the harsh desert. Access to water explains the city’s origin and long history.

Jericho is located in an oasis. It is sustained by an astonishingly dependable underground water supply known as the Ain es-Sultan. This natural spring — also known as Elisha’s spring, after a biblical story in the Book of Kings in which the prophet Elisha heals these waters — has apparently never dried up during 14,000 years of continuous human residency.
More than 1,000 gallons of fresh water bubble up from the source every minute. Early farmers quickly worked out a system of irrigation canals to send this precious resource to the surrounding farmland, which is made up of very fertile alluvial soil.

It is this almost unique combination, of natural defenses, strategic location, rich soil, abundant sunshine, and, most of all, plentiful water, that has made Jericho such an attractive and sustainable place for foragers and farmers alike for so many thousands of years. When we tally up this list of environmental advantages it’s hardly surprising that Jericho has enjoyed the sort of long and rich history that it has.

The human history of Jericho

Archaeologists have discovered at least 20 layers of settlement at the site of Jericho. Kathleen Kenyon was the first to extensively investigate the site using modern techniques, back in the 1950s. She was searching for the Bronze Age city named in the Hebrew Bible as the “city of palm trees,” but her excavations quickly revealed evidence of occupation dating back many thousands of years before the Bronze Age.

Her trenches reached the remains of an early farming settlement about six acres in area, dated to about 9600 BCE. More excavations revealed even earlier layers, proving that the site had been first occupied, probably by Natufian foragers, as early as 12,000 BCE. This made Jericho the oldest continuously inhabited settlement in all human history.

After the original foraging settlement, evidence showed that early farmers had learned to domesticate emmer wheat and barley. The availability of these two cereal grains is another significant biological advantage enjoyed by this region.

Of the hundred or so domesticated plants humans depend upon today, wheat is one of the most important. It is a superb example of a species that is perfect for domestication. It can grow in a wide range of environments, and it can generate new diversity at an incredibly rapid rate, which accounts for its tremendous global success as a food crop.

Domesticated emmer wheat rapidly spread from the Fertile Crescent all across West Asia until it was replaced in the Bronze Age by free-threshing wheat. Today, our planet produces more than 620 million tons of wheat each year, providing roughly one-fifth of all the calories consumed by the 6.5 billion members of the human community.

Over the thousand years between 8350 and 7350 BCE, the village of Jericho evolved into a town that was home to perhaps 3,000 farmers. They lived in mud-brick houses arranged without any obvious evidence of town planning. Later residents learned to domesticate sheep. They also developed a cult of preserving human skulls and placing shells in their eye sockets.

A plaster sculpture excavated from Jericho, about 7000–6000 BCE
Later farming communities were more socially complex and better organized than their predecessors. The residents now lived in rectangular shaped buildings made of mud bricks resting on stone foundations. In each of these buildings, a number of rooms were clustered around a central courtyard. One room was usually larger — the living room — while the rest were small and probably used for storage. Kathleen Kenyon believed that one particularly large room she excavated may have been a shrine where some type of sacred object — perhaps a pillar of volcanic rock she found nearby — was worshipped in a niche in the wall.

Archaeologists working in these later agrarian layers have discovered farming tools like sickle blades, axes, and grindstones; eating vessels including dishes and bowls made from limestone; spinning whorls and loom weights for weaving textiles; and extraordinary full-sized plaster human figures that must have been used in a religious practice.

After more than 10,000 years of continuous occupation, Jericho reached its height in the Bronze Age, between 1700 and 1550 BCE. Chariot-riding elites dominated and defended the city during an age of widespread conflict across much of Palestine, or the "land of Canaan," as it was then called. The defenses were based upon a massive stone wall. But even this was not strong enough to prevent disaster. Evidence shows conclusively that around 1550 BCE the ancient city of Jericho was destroyed.

For more than a century, archaeologists and biblical historians have debated the question of whether this destruction might be evidence of the Battle of Jericho. This is described in the Book of Joshua as the first battle fought by the Israelites in their campaign for the conquest of Canaan. In the biblical account, Joshua's army marched around the city walls for seven days. On the seventh day, the priests sounded their ram's horn trumpets, the Israelites unleashed a mighty war cry, and the walls of Jericho collapsed, killing every man, woman, and child in the city.

According to biblical chronology, this battle would have taken place in 1400 BCE, but modern archaeologists date the destruction of Jericho to a century and a half earlier. Because of the discrepancy, modern scholars often dismiss the historical accuracy of the Battle of Jericho, although many biblical historians continue to make claims for its truth.

Despite this disaster, Jericho rose again in the centuries that followed. By the eighth century BCE it had fallen to the Assyrians. The powerful Babylonian king Nebuchadnezzar also conquered the land of Israel and sent tens of thousands of residents into exile. But the exiles were freed soon after by the Persian king Cyrus the Great. Jericho then served as an administrative center for the Persians, and later as a private estate for Alexander the Great, both of whom were attracted to the city by its strategic location and abundant resources.
Three centuries later, the Hebrew king Herod the Great was granted control over Jericho by the Romans. Under Herod the city flourished as an important agricultural, commercial, and administrative center, and also as a winter resort for Jerusalem’s aristocracy. In the first century of the Common Era, the Greek geographer Strabo described the city’s environmental advantages like this:

Jericho is surrounded by mountainous country which slopes toward it like a theater. It is mixed with all kinds of cultivated and fruitful trees, though it consists mostly of palm trees. It is everywhere watered with streams.

In the same century, according to the Christian Gospels, Jesus passed through Jericho, where he healed a blind beggar and inspired the local tax collector Zacchaeus to give up his unethical practices.

After the fall of Jerusalem to the Romans in 70 CE, Jericho entered a period of decline. In the seventh century, Jericho became part of the expansive realm of Islam, and we have another description of the advantages of the city written by the tenth-century Arab geographer Al Maqdisi:

The water of Jericho is held to be the highest and best in all Islam. Bananas are plentiful, also dates and flowers of fragrant odor.

During the Crusades, Christians occupied the city until they were driven out by Saladin, the leader of the Arab and Muslim opposition to the Crusaders. Throughout the long reign of the Ottomans, from 1517 to 1918, Jericho slowly shrank to the size of a village and was regularly raided by Bedouins. In the twentieth century Jericho was controlled at various times by Britain, Jordan, Israel, and the Palestinians. Today Israel and the Palestinian Authority continue to argue over the status of Jericho, and the future of the city and its 20,000 residents is anything but clear.
Physical endurance

The history of Jericho is rich and complex. It has seen the same parade of triumphs and tragedies that so many other ancient cities have experienced. But Jericho’s status as the most ancient city on Earth makes it unique.

This longevity strongly supports the idea that history is ultimately as much about the physical environment as it is about technology or leadership. At the end of the last ice age, the Fertile Crescent was favored with an array of natural advantages, which explains not only the emergence of agriculture but also that of the first villages, towns, and cities. These same advantages of geography, flora, fauna, and climate made it possible for the Natufians to establish a small foraging community deep in the tectonic fault of the Jordan Rift Valley, surrounded by natural defensive walls, and blessed with rich soil and a seemingly endless supply of fresh water, that easily transitioned into a thriving agricultural community.

The history of Jericho is a 14,000-year-long reminder that the story of humanity can really be understood only if it is embedded deeply into the natural context in which it has played out. For the environment is truly the great physical stage upon which our human drama continues to unfold.

Sources


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