

A Decade of Discoveries in Biblical Jerusalem

YUVAL GADOT, YIFTAH SHALEV, AND JOE UZIEL

FOR THE PAST 50 YEARS, BAR has treated its readers to some of the most fascinating discoveries from biblical Jerusalem. Indeed, almost everywhere archaeologists excavate in the Holy City, they come upon something new and exciting: an ancient monument built by a famous king, an inscription that reveals new details about the city's history, or everyday objects that provide valuable insights into how Jerusalem's inhabitants lived or what they believed.

But, despite many decades of archaeological work, which has made Jerusalem one of the most excavated places in the world, there is still much left for discovery.

Since 2011, we have partnered with foreign and Israeli archaeologists to excavate especially the city's southeastern ridge, the area known today as the City of David. In what follows, we highlight the most dramatic discoveries of the past decade and contextualize them within our understanding of Jerusalem's development throughout the Iron Age (c. 1200–586 BCE). We begin in the much-debated tenth century, when the city was supposedly ruled by the biblical kings David and Solomon, before considering its expansion as the capital of a small kingdom in the ninth and eighth centuries. We then explore new discoveries from the seventh and early sixth centuries, when Jerusalem became one of the wealthiest and most important cities of the southern Levant, before it was finally conquered by the Babylonians in 586 BCE.

Jerusalem of the early Iron Age has been the focus of much debate, fueled by the biblical narratives of David's conquest of the Jebusite city (2 Samuel 5), followed by major construction projects initiated by David

and then Solomon, his son and successor (1 Kings 6). Archaeology, however, has revealed only scant evidence for this period. Enigmatic remains, such as the Stepped Stone Structure (sometimes identified with the biblical Millo) and the Large Stone Structure (sometimes identified with David's palace), often raise more questions than answers about tenth-century Jerusalem. Likewise, although the area of the Ophel has shown some promise for understanding the city's development during the early Iron Age, here too questions persist as to how the remains should be dated and interpreted.

Our excavations have added yet another piece to the puzzle: a rock-cut moat that separated the area of the Temple Mount and the Ophel in the north from the City of David ridge to the south. Typical of Jerusalem's archaeology, this important discovery happened across many decades. Close to 60 years ago, British archaeologist Kathleen Kenyon theorized that until the days of Solomon the city was located primarily on the southeastern ridge, in close proximity to the Gihon Spring, and the more elevated area of the Temple Mount lay outside the city walls to the north.¹ As such, she believed the city must have had a northern fortification line that would prevent attacks coming from that direction. And, indeed, when she excavated in the eastern part of the City of David (her Area R), she found that the depth of the bedrock plummeted as one moved from south to north, forming a valley that was hidden by years of later fill and construction. She named this the Northern Defensive Valley.

In 2019, while excavating the Givati Parking Lot site

along the western slope of the City of David, we similarly detected bedrock along most of the easternmost part of our excavation, yet it was nowhere to be found for nearly 100 feet from south to north. For four years, we excavated through more than a thousand years of accumulated debris—from the Abbasid back to the Hellenistic period—before we finally came down to bedrock. We now believe this trough is not a natural valley but a manmade ditch, measuring nearly 100 feet wide and 30 feet deep, that extended across the entirety of the northern part of the City of David, to Kenyon's Area R to the east.

Although we cannot yet date the moat's construction with any certainty, we know that it was in use already by the time of the first kings of Judah, as a series of enigmatic channels (likely for industrial use) were carved into the bedrock in the late ninth or early eighth century. As such, the moat had to have been created earlier, in the ninth or possibly tenth century under the first biblical kings, or even several centuries before during the Canaanite period, perhaps as a means to defend the

city from the north. Whatever its original function, however, by the ninth century, the moat's steep-sided scarps served primarily to limit movement between the City of David and the Temple Mount, suggesting that the city was already divided between a wealthy upper city and a supporting lower city.

If the tenth century is at the center of most scholarly debates regarding biblical Jerusalem, archaeologists now agree that the ninth century witnessed the city's growth and development. A large rock-cut installation excavated just south of the Gihon Spring about 15 years ago yielded a large pottery assemblage from this period, as well as fish bones and other finds that indicate Jerusalem's involvement in regional trading networks.² For the first time, clay bullae stamped with symbolic motifs—including one with a Phoenician ship and another with what may be a volute capital—evinced the city's developing administrative system.

Similar finds also come from a building excavated near the Gihon Spring, where pottery analysis has shown trade and cultural connections, even with the





NATHAN STEINMETZ, BAS

CITY OF DAVID. According to the Hebrew Bible, Jerusalem during the time of David and Solomon was a place of major construction projects, including the Temple and various palaces and fortifications. Unfortunately, archaeology has provided little material evidence of this period, while some surviving monuments that may date to this time are quite enigmatic, such as the Stepped Stone Structure (above), identified by some with the biblical Millo (2 Kings 12:20) and by others as a retaining wall for a monumental structure built above. Similarly, the so-called Large Stone Structure, located on the ridge directly above the Stepped Stone Structure, is sometimes identified with David's palace. Nevertheless, some discoveries of the past decade have greatly expanded our understanding of Jerusalem's development throughout the Iron Age (c. 1200–586 BCE).

Philistine cities along the coast. Furthermore, excavations on the western hill indicate that Jerusalem had already begun to expand across the Tyropoeon Valley in the ninth century. Beyond the archaeological evidence for domestic architecture, trade, and administration, we now also know that wealthy residences and new fortifications were built during this period.

Building 100, a luxurious, two-story reception hall that we excavated along the western slope of the City of David, is a fine example of both elite architecture and the city's westward expansion.* Although the building continued in use until the Babylonian destruction (see below), new radiocarbon dating confirms it was first constructed in the ninth century, with a substantial renovation in the mid-eighth century. Interestingly, the date of the second phase was obtained through radiocarbon analysis of the remains of a bat that became stuck in a small opening in one of the building's walls during the renovation.

Although it is difficult to understand Jerusalem's

* Yuval Gadot and Yiftah Shalev, "Lifestyles of Jerusalem's Rich and Famous," *BAR*, Spring 2024.

fortifications during this period, some have suggested that the Bronze Age fortifications built to defend the city's southeastern ridge continued to function into the early Iron Age. That this was indeed the case is strongly suggested by the fortifications built to protect the city's most important resource, the Gihon Spring. These included a massive tower made of immense boulders that had walls measuring more than 16 feet thick.

When the fortifications were first discovered, they were dated to the Middle Bronze Age (c. 2000–1550 BCE) based on their style and the pottery found within construction fills. Recent radiocarbon samples retrieved from beneath the tower, however, date the structure to the late ninth century. So, whether the tower was initially built in the Middle Bronze Age and then significantly renovated centuries later, or whether it was an entirely new fortification built in the Iron Age, it is clear that Jerusalem's ninth-century rulers were able to take on major building projects that aimed to protect the city and its resources.**

** For the possibility of this tower being the famous biblical Millo, see Chris McKinny et al., "The Millo: Jerusalem's Lost Monument," *BAR*, Fall 2023.

Moving now to the mid-eighth century, we need to consider two major events that made this era a critical point in Jerusalem's history. The first was a devastating earthquake. Noted in the first verse of the Book of Amos, the tremor has been identified in destruction layers exposed at major sites across Israel, including Megiddo and Hazor. In Jerusalem, however, no traces of this devastating earthquake had ever been discovered.

In 2018, a building was exposed on the eastern slope of the city that suffered a severe destruction sometime in the eighth century. Smashed pottery vessels lined one of the walls. The remains of a piglet, who appeared to have been scrambling to escape, were found between the vessels. Indeed, in examining earlier archaeological reports, it became clear that other areas of Jerusalem were destroyed around the same time.

Both pottery and radiocarbon analysis date the building to the mid-eighth century, leading us to believe the building and large swaths of Jerusalem were destroyed during the "Amos earthquake," which occurred during the days of King Uzziah (Amos 1:1). In fact, the major renovation of Building 100 noted above probably occurred following the earthquake, as suggested by the date of the bat skeleton found inside the walls.

The second event, which seems to have come on the heels of the earthquake, was the significant expansion of Jerusalem's walls and fortifications. In 2020, on the eastern slope of the City of David, a large section of the city fortification was discovered. Measuring 36 feet long and more than 13 feet thick, it was constructed just to the west of the building that had been destroyed by the earthquake and had undergone significant modifications



GIWATI MARKING LOT EXPEDITION, COURTESY YUVAL GADOT



BALAGE BALOGH / ARCHAEOLOGY ILLUSTRATED

DEFENSIVE DITCH. Separating the ancient Temple Mount and the Ophel from the City of David to their south was this man-made trough. Constructed during the time of the first kings of Judah, if not earlier, it is nearly 100 feet wide and 30 feet deep. Although the moat was first detected 60 years ago, its full extent and function are only now becoming apparent: Running across the entire northern limit of the City of David, it initially functioned as a moat that defended the city on the north. In around 800 BCE, enigmatic channels were carved into the bedrock of this ditch, likely for industrial use. By that time, the moat served to limit movement between the City of David and the Temple Mount (see reconstruction at left).



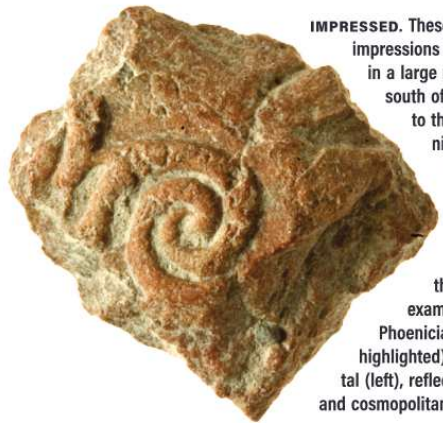
MATTHEW STIMMER, BAS

SPRING TOWER. Possibly built by the Canaanites during the Middle Bronze Age (c. 2000-1550 BCE) and then heavily renovated by the Judahite kings in the late ninth century, this tower was designed to protect the waters of the Gihon Spring. Emanating naturally at the base of the city's southeastern ridge, the spring was Jerusalem's main water source until the Hellenistic and Roman periods, when aqueducts were built to bring water from surrounding regions. Built with massive boulders, the tower and its system of fortifications are by far the most monumental structures yet found in pre-Roman Jerusalem. Some believe the Spring Tower should even be identified with the biblical Millo (and not the Stepped Stone Structure as mentioned on p. 48), where the city's residents may have come to fill their water containers safely and securely.

during the wall's construction. Stratigraphic and radio-carbon evidence date the wall between 730 and 710, suggesting that Uzziah, not Hezekiah, was the Judahite king first responsible for constructing a single wall that encompassed Jerusalem's eastern and western hills.

This wall appears to be a single construction, as there is no evidence along the western slope of the City of David for an earlier stage of fortifications that enclosed only the city's southeastern ridge. As such, these fortifications were built not to withstand the Assyrian attack

of 701, but rather were an earlier project to protect the city and provide stability and support to buildings compromised in the earthquake. In addition, the date of these fortifications calls for a fresh examination of the western hill fortifications, as these two walls were likely part of one large project. Now that we know the city's westward expansion took place in the ninth century,



IMPRESSED. These two bullae, or stamp impressions made in clay, were found in a large rock-cut installation just south of the Gihon Spring. Dating to the second half of the ninth century BCE, they are the earliest such bullae from Jerusalem. Bullae with symbolic imagery attest to the developing administrative system of the Judahite state. These examples feature motifs of a Phoenician ship (right, with ship highlighted) and perhaps a volute capital (left), reflecting the trade connections and cosmopolitan culture of the royal city.



BOTH IMAGES: R. RECH AND E. SHUKRON'S EXCAVATIONS IN THE CITY OF DAVID. PHOTOS BY CLARA AMIT, IAA

BENEFICIAL BONES. Although the prophet Amos notes an earthquake that devastated Judah during his days (1:1), archaeologists working in Jerusalem had found no evidence for such destruction. Two recently discovered animal skeletons, however, are silent witnesses of the tragic event. In a building on the eastern slopes of the City of David, a piglet was found trapped among destroyed pottery vessels (below). Pottery and radiocarbon analysis date the destruction to the mid-eighth century BCE. Similarly, when a wealthy residence in the Givati Parking Lot (Building 100) was rebuilt following a substantial destruction, a bat was sealed inside a wall opening (bottom). Radiocarbon analysis of its remains similarly dated the event to the mid-eighth century. Since Jerusalem did not fall to the hands of the Assyrians, this building, too, was likely renovated at this time as a result of the earthquake.



JOE UZIEL, CITY OF DAVID



YANIV BERMAN, COURTESY GIVATI PARKING LOT EXPEDITION

an earlier date for the western hill fortifications seems plausible.

Even though Jerusalem was spared destruction at the hands of the Assyrians, the city and much of Judah's territory came under Assyrian imperial domination in the seventh century, ushering in a prolonged period of expansion and wealth. In Jerusalem's immediate hinterland, more than 65 sites dating to this period have been identified, some of which have monumental architecture. For example, at the hilltop site of Armon ha-Natziv, which overlooks the Temple Mount from the southeast,



Johanna Regev, a researcher with the Weizmann Institute of Science, sampling for radiocarbon analysis.

KOB HABATI, COURTESY OF THE CITY OF DAVID ARCHIVE

Dating Biblical Jerusalem

Dating ancient construction projects and associating them with historically or biblically attested kings is one of the biggest challenges the city's archaeology has to offer. One of the most significant contributions to the study of ancient Jerusalem has been the application of intensive radiocarbon dating, which has helped refine the chronology of the site and reconstruct the historical context of major building efforts. Since 2014, a collaborative project of the Weizmann Institute of Science, the Israel Antiquities Authority, and Tel Aviv University has focused on developing an absolute chronology for the city's archaeology—from the Early Bronze Age to the Ottoman period—based on the systematic collection and analysis of radiocarbon data.¹

Within this framework, more than a hundred radiocarbon samples from the City of David excavations have been dated to the Iron Age, with 18 samples falling within the early Iron Age (12th–10th centuries BCE). Despite the lack of architectural remains that can be securely dated to this period, such an abundance of early Iron Age dates clearly indicates widespread human activity on Jerusalem's southeastern ridge during this critical time in ancient Israel's history.

¹ See Yuval Gadot and Joe Uziel, "Jerusalem in History: The Hard and Life Sciences Perspective," *Hebrew Bible and Ancient Israel* 12.1 (2023), pp. 133–153.

archaeologists found a trove of royal architectural elements, including decorative window frames, balustrades, and several volute (or proto-Aeolic) capitals.³ This structure, which may have been an Assyrian-style ceremonial building with a surrounding garden, was likely built during the time of Manasseh but then dismantled as part of Josiah's cultic reforms.

In addition, many sites around Jerusalem had vineyards, suggesting the hills and valleys in the city's hinterland were part of royal or temple estates. The wine they produced was brought into the city to serve a



SHAI HALEV, ISRAEL ANTIQUITIES AUTHORITY

CAPITAL GAINS. In the seventh century BCE, as Judah came under the political and cultural dominance of Assyria, monumental architecture characterized dozens of sites around Jerusalem. This prolonged period of wealth and prosperity is on display at the hilltop site of Armon ha-Natziv southeast of Jerusalem. Buildings at the site included distinctive royal architectural elements, such as decorative window frames, balustrades, and these volute (or proto-Aeolic) capitals. They come from a ceremonial building nestled in a garden, well beyond the city walls. The craftsmanship and location are indicative of Jerusalem's prosperity during this period.

the seventh and sixth centuries and perhaps its control over nearby desert trade routes that connected South Arabia with the Mediterranean.

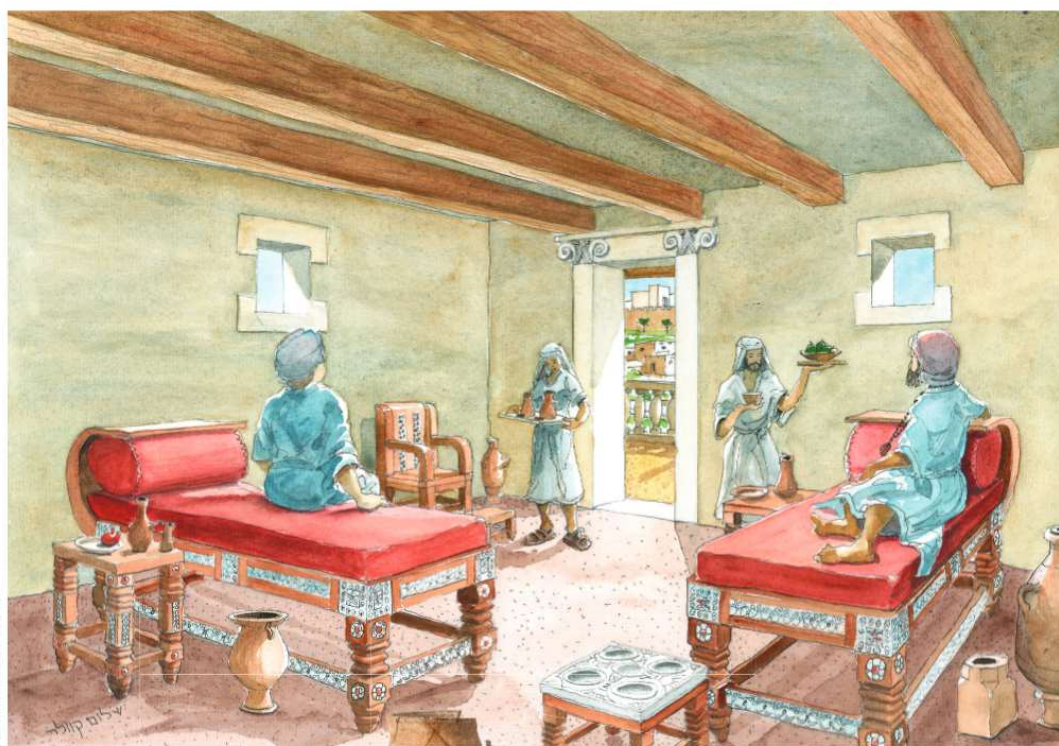
Finally, the excavation of the final phases of Building 100 revealed just how wealthy the city had become by the time of the Babylonian destruction in 586. This two-story building, which likely functioned as a royal reception or banqueting hall (recalling the "chambers" of royal officials mentioned in 2 Kings 23:11 and Jeremiah 35:2–5), was a place where Jerusalem's elite drank and socialized with friends and guests. In addition to a complete set of drinking vessels and the remains of a high-quality terrazzo-style plaster floor, we found a collection of precious ivory inlays that once decorated the hall's

growing number of wealthy elites, as evinced by the many storage jars from this time that have been excavated in the City of David. Although we always assumed the storage jars held wine (or perhaps olive oil), residue analysis showed the contents were flavored with vanilla, an extremely rare spice that had to be imported from Africa or India. Such finds indicate Jerusalem's wealth in



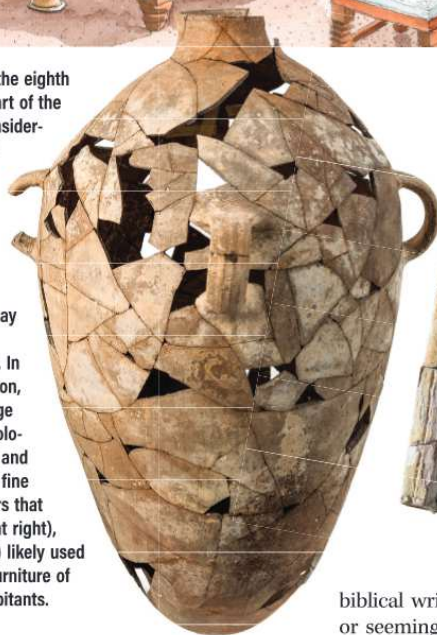
KOTY MARAT, COURTESY OF THE CITY OF DAVID ARCHIVE

FORTIFYING JERUSALEM. On the eastern slope of the City of David, archaeologists identified a large section of the Iron Age city wall. Radiocarbon and stratigraphic analyses date this fortification securely to the late eighth century, possibly several decades before the Assyrian attack of 701 BCE. It was then King Uzziah, not Hezekiah, who first encircled Jerusalem's eastern and western hills to protect the city. During Sennacherib's siege, Jerusalem was already fortified, which no doubt emboldened King Hezekiah to rebel against the Assyrian Empire.



SHALOM KWELLER, CITY OF DAVID

WEST SIDE STORY. During the eighth century BCE, the western part of the City of David underwent considerable expansion. A luxurious two-story edifice (Building 100) excavated in the Givati Parking Lot was likely a reception hall used for official ceremonies and social gatherings. Serving Jerusalem's ruling elite, it may be an example of a biblical "chamber" (e.g., 2 Kings 23). In the building's final destruction, dated to the Babylonian siege of Jerusalem in 586, archaeologists found numerous seals and seal impressions as well as fine drinking vessels, storage jars that held vanilla-flavored wine (at right), and ivory plaques (far right) likely used to decorate the expensive furniture of Jerusalem's wealthiest inhabitants.



JAR AND IVORY, SASSIA KLIT

luxurious furniture.* Such finds demonstrate that Jerusalem's wealthiest residents were well versed in the fashions of the day and benefited from the high-end luxury trade that was encouraged and facilitated by the Assyrian, Egyptian, and then Babylonian empires.

All these finds, most of which have been made just within the past few years, continue to transform our understanding of Jerusalem during the time of the

biblical writers. Each discovery, no matter how small or seemingly insignificant, adds an additional piece to the puzzle of Jerusalem's past, which, over time, comes more and more into focus. Now, we can only anticipate what we will learn over the next 50 years when we celebrate BAR's centennial. 📖

¹ Kathleen M. Kenyon, *Digging Up Jerusalem* (London: Benn, 1974); Margreet Steiner, *The Settlement in the Bronze and Iron Ages*, vol. 3 of *Excavations by Kathleen Kenyon in Jerusalem 1961–1967* (Sheffield: Sheffield Academic, 2001).

² Ronnie Reich, Eli Shukron, and Omri Lerna, "Recent Discoveries in the City of David, Jerusalem," *Israel Exploration Journal* 57 (2007), pp. 153–169.

³ Yaakov Billig, Liora Freud, and Efrat Bocher, "A Luxurious Royal Estate from the First Temple Period in Armon ha-Natziv, Jerusalem," *Tel Aviv* 49 (2022), pp. 8–31.

* Reli Avisar, "Fragments of Luxury: The Jerusalem Ivories," BAR, Spring 2024.