

From Proto-Aeolic to Stone Volutes: Historiography, Chronology, and Function of Iron Age Levantine Volute Capitals

Agent Bayes System

Written by Gemini 4 Argon

1. Introduction: Discovery and the Problem of Nomenclature

Since Gottlieb Schumacher unearthed the first carved limestone block bearing a paired scroll motif during his 1903 excavations at Megiddo, over 55 examples of these monumental carvings have been recovered across 16 Iron Age sites in Israel, Jordan, and Syria (Harrison 2004: 1; Lipschits 2011: 203; Franklin 2023: 156). From the outset, scholarly nomenclature was shaped by comparisons with Classical Greek architecture and with Max Ohnefalsch-Richter's 1889 discovery of volute-carved slabs flanking the entrances to Tombs 5 and 12 in the Cypro-Archaic II necropolis at Tamassos on Cyprus (Shiloh 1979: 88; Lipschits 2011: 203; Franklin 2023: 156). Until the 1940s and 1950s, researchers routinely labeled the Levantine finds **Proto-Ionic** or **Proto-Ionian**, a designation employed by William Bell Dinsmoor for Aeolian column capitals and by Herbert Gordon May and David Ussishkin for Palestinian examples (May 1935: 5; Betancourt 1977: 4; Lipschits 2011: 203). From mid-century onward, the competing term **Proto-Aeolic** (or **Proto-Aeolian**), introduced by Schumacher and popularized by John Boardman, William Foxwell Albright, and Yigael Yadin, gained wide currency (Betancourt 1977: 4; Shiloh 1979: 88; Lipschits 2011: 203). Both prefixes assumed a teleological lineage in which Near Eastern stone capitals served as direct evolutionary antecedents to Archaic Greek architectural orders (Betancourt 1977: 4; Lipschits 2011: 203).

Attempts to sustain or refine this East-to-West taxonomy soon encountered structural and chronological obstacles (Betancourt 1977: 4; Lipschits 2011: 203). In 1959, Boardman proposed separating engaged pilaster capitals with volutes springing from a central triangle in Palestine and Cyprus from free-standing column capitals without a central triangle in Aeolis (Betancourt 1977: 4). Philip Betancourt observed that subsequent discoveries blurred Boardman's division, including Hazor capitals lacking central triangles, sixth-century BCE engaged pilaster capitals on the Halikarnassos peninsula, and reconstructions placing free-standing columns in North Syrian and Palestinian *bit-hilani* porches (Betancourt 1977: 4). Dropping the evolutionary prefix, Betancourt advocated the generic phrase **Aeolic style** for all architectural supports with vertically rising volutes (Betancourt 1977: 4). He suggested that late seventh-century BCE

East Greek builders may have absorbed Near Eastern woodworking and architectural details, such as North Syrian plinths, shaft moldings, and recessed window niches known from Ramat Rahel stone balustrades and North Syrian or Phoenician **Woman at the Window** ivory plaques (Betancourt 1977: 117; Betancourt 1977: 118–119; Betancourt 1977: 119–120; Betancourt 1977: 120–121). Conversely, Burkhardt Wesenberg, Yigal Shiloh, and Amihai Mazar rejected any organic connection between Levantine capitals and Greek architecture, emphasizing both sharp stylistic divergences and a chronological gap of nearly two centuries separating the Iron Age Israelite corpus from the earliest late seventh-century BCE Aegean examples (Betancourt 1977: 120–121; Lipschits 2011: 203).

To replace Classical labels with indigenous terminology, Shiloh proposed renaming the group the **palmette capital** (or **Palmetto**, corresponding to the biblical Hebrew *timorah* attested in descriptions of Solomon’s and Ezekiel’s temples) or the **Israelite capital** after the royal centers where 34 examples had come to light (Shiloh 1979: 90; Shiloh 1979: 90–91; Lipschits 2011: 204). Oded Lipschits demonstrated that both alternatives are flawed: biblical *timorah* (occurring 19 times in the Hebrew Bible) consistently denotes flat engravings on temple walls and doors rather than stone capitals in palaces and city gates, while the ethnic label “Israelite” ignores the ninth-century BCE Omride origin of the northern group and the motif’s seventh-century BCE persistence in Judah, Moab, and Ammon after Israel’s fall (Lipschits 2011: 204). Whereas Lipschits, following Antonia Ciasca and Wesenberg, endorsed the descriptive term **volute capital** (Betancourt 1977: 4; Lipschits 2011: 204), Norma Franklin showed that even the word “capital” derives from misreading the Tamassos tomb reliefs—which were earth-retaining stone revetments rather than independent architectural capitals—and introduced the neutral term **stone volutes** to free the corpus from unproven structural assumptions (Franklin 2011: 129; Franklin 2011: 131; Franklin 2023: 156).

2. Iconography and Cultural Origins: Phoenicia, Israel, or Egypt?

The visual composition of Iron Age Levantine volute capitals follows a consistent rectangular schema carved in raised relief on one or both faces (Ruiz and Carretero 2021: 189–190). At the center of the block stands an isosceles triangle resting on the base, framed by double or triple relief lines and topped by a rectangular abacus (Lipschits 2011: 215; Ruiz and Carretero 2021: 189–190). From the sides of this central triangle spring two large lateral spiral volutes that curve outward toward the edges of the block, often accompanied by upper and lower curved flanking leaves and circular concentric oculi positioned beside the triangle’s apex (Shiloh 1979: 10–11; Lipschits 2011: 215; Ruiz and Carretero 2021: 189–190). While the structural elements of abacus, triangle, volutes, oculi, and flanking leaves recur across the corpus, their relative proportions vary by region and period, as seen in the narrow, finely smoothed 7-centimeter triangle strip of Jerusalem capital J1 compared to the wider triangles and omitted leaves on

examples from Moab (Shiloh 1979: 10–11; Lipschits 2011: 215).

Most scholars, including Yigal Shiloh, Ephraim Stern, Yitzhak Magen, Mordechai Cogan, and Norma Franklin, agree that this composition represents the stylized Near Eastern “Tree of Life” or date palm, which decorated Mesopotamian and Syrian cultic art from the third millennium BCE onward (Shiloh 1979: 42; Franklin 2011: 132; Lipschits 2011: 204; Mumcuoglu and Garfinkel 2021: 464). In Shiloh’s reading, the stone relief translates the crown of a palm tree into architectural stone: the central triangle represents the upper part of the trunk, while the volutes and side leaves replicate the curving branches and hanging date clusters (Shiloh 1979: 42). To demonstrate how artisans stylized a complete palm tree into a capital motif by removing its lower trunk, Shiloh pointed to identical transitions in minor arts and stone reliefs, including the Samaria ivories, a capital-shaped ivory plaque from Salamis in Cyprus, reliefs from Tell Halaf, and a basalt orthostat from the temple at Ayin Dara in Syria (Shiloh 1979: 42; Shiloh 1979: 89–90). Franklin accepts the identification of the motif with the date palm (*Phoenix dactylifera* L.) and Assyrian symbols of agricultural abundance, but she argues that the carving depicts the vegetative propagation at the base of a young palm rather than its upper crown (Franklin 2011: 132; Franklin 2011: 138–139). Because female date palms reproduce asexually through basal auxiliary bud offshoots that unfurl outward from the mother trunk between triangular frond stubs, and because farmers break off those triangular stubs on mature trees to climb them for harvesting, only juvenile offshoot-producing palms retain the undisturbed triangular and rhomboid geometry depicted on the stone volutes (Franklin 2011: 132; Franklin 2011: 132; Franklin 2011: 133).

A competing iconographic tradition looks south to Egypt rather than to Mesopotamian palm imagery (Mumcuoglu and Garfinkel 2021: 464). Early studies by William H. Goodyear and Hélène Danthine noted that Near Eastern sacred trees and “Phoenician palmettes” frequently borrowed Egyptian lotus, lily, and papyrus motifs (Goodyear 1891: 262; Danthine 1937: 69). Philip Betancourt traced the earliest architectural columns with Aeolic-like designs to the second half of the Eighteenth Dynasty in Egypt, where painted Theban tomb canopies and polychrome limestone relief slabs from the western gateway at Medinet Habu depict superimposed lotus blossoms, open papyrus clusters, and lilies rising above bundled reed shafts (Betancourt 1977: 19; Betancourt 1977: 19; Betancourt 1977: 167–171; Mumcuoglu and Garfinkel 2021: 464). In these Egyptian supports, volutes occasionally spring from central triangles with small suspended floral elements below them in the exact position of the later Palestinian and Cypriot petals (Betancourt 1977: 19). Extending this Egyptian derivation, David Ian Lightbody argues that the scroll-form volutes of Levantine and Cypriot capitals were stylistically and ideologically modeled on Bronze Age Egyptian papyrus-bundle capitals, representing rolled papyrus sheets and curled papyrus reed stems (Lightbody 2013: 57).

Closely tied to this iconographic debate is the question of whether Phoenician or Israelite masons translated the motif into monumental stone architecture (Shiloh 1979: 83; Ruiz and Carretero 2021: 190–191). Traditional scholarship attributed both ashlar masonry and the volute capital to Phoenician craftsmen dispatched by Hiram of Tyre, assuming that newly sedentarized

Israelites lacked architectural expertise and pointing to the later Mediterranean spread of the capital to Cyprus and western Phoenician colonies such as Cerro del Villar (Shiloh 1979: 83; Ruiz and Carretero 2021: 190–191). Shiloh dismantled the archaeological basis of this Phoenician hypothesis by noting that marine surveys by Antoine Poidebard and Honor Frost at Tyre, Sidon, and Arwad, along with excavations at Sarepta, Akko, and Athlit, proved that the coastal header-stretcher walls once cited as Iron Age Phoenician prototypes are actually Hellenistic or Roman-Byzantine (Shiloh 1979: 73; Shiloh 1979: 83). Furthermore, Shiloh contrasted the architectural traditions of North Syria (from Hamah to Carchemish and Zinjirli), where builders used stone orthostat bases to support brick-and-timber superstructures with wooden capitals and where not a single stone volute capital has been found, against the full ashlar masonry of Israel and Judah (Shiloh 1979: 89–90). Because full ashlar walls built to their entire height in stone with three-dimensional bonding appear during the tenth and ninth centuries BCE only in royal centers of Israel and Judah, Shiloh and Oded Lipschits conclude that while Tyrian artisans supplied Lebanese timber and woodworking expertise, the stone volute capital itself was an indigenous Palestinian architectural development (Shiloh 1979: 79–80; Shiloh 1979: 84–85; Shiloh 1979: 86; Shiloh 1979: 89–90; Ruiz and Carretero 2021: 190–191).

3. Chronology of the Northern Corpus: Solomonic Grandeur or Omride Statehood?

Twenty-seven volute capitals have been unearthed across five urban centers in the Kingdom of Israel: twelve at Megiddo (excluding the miniature exemplar M11), seven at Samaria, three at Tel Dan, two at Hazor, and three on Mount Gerizim, alongside a possible additional example reported by R. A. S. Macalister and Baruch Brandl from the gate area at Gezer (Lipschits 2011: 204–205; Lipschits 2011: 205; Lipschits 2011: 205–206; Kleiman 2022: 191–192). Although these northern capitals share an overarching design, each city produced distinct regional variants classified within Yigal Shiloh’s typological system (Lipschits 2011: 207; Kleiman 2022: 191–192). Megiddo yielded three styles without exact parallels elsewhere, designated by Shiloh as Types A1, A2, and the unusually wide Type B capitals M4 and M5 (Lipschits 2011: 205; Lipschits 2011: 207). The Samaria examples belong to Type A3, which resembles the Megiddo repertoire but places stronger emphasis on the central circle of the volute and omits the abacus (Lipschits 2011: 207). At Tel Dan, three capitals discovered by Avraham Biran in 1984 and 1992 after the publication of Shiloh’s catalogue correspond to Type C (paralleled by Megiddo fragment M10) and Type D (D1), whereas the two Hazor capitals (unifacial H1 and bifacial H2) belong to Type D and the three Mount Gerizim capitals form a separate local type (Lipschits 2011: 206; Lipschits 2011: 206–207; Lipschits 2011: 207; Kleiman 2022: 191–192). Because not a single northern capital was recovered *in situ* within its primary building, establishing the absolute chronology of this assemblage depends entirely on the contested dating of the ashlar monuments with which they were associated (Shiloh 1979: 21; Kleiman 2022: 190).

Proponents of the traditional High Chronology, led by Yigael Yadin and Shiloh and followed by Ronny Reich and Ephraim Stern, dated the emergence of ashlar architecture and the earliest volute capitals to the tenth-century BCE reigns of David and Solomon (Shiloh 1979: 20–21; Shiloh 1993: 1017–1019; Lipschits 2011: 205; Kleiman 2022: 190). Relying on the biblical account of Solomon’s building activities at Hazor, Megiddo, and Gezer in 1 Kings 9:15, Yadin and Shiloh assigned the monumental ashlar complexes of Megiddo Stratum VA–IVB to a tenth-century Solomonic horizon (Shiloh 1979: 20–21; Shiloh 1993: 1017; Shiloh 1993: 1017–1019). At Megiddo, this stratum included the northern Palace 6000, the southern Palace 1723 inside Courtyard 1693 with its ashlar Gate 1567, Administrative Building 1482, the six-chambered City Gate 2156, and the western water-gate Gallery 629 (Shiloh 1993: 1017; Shiloh 1993: 1017–1019). Shiloh attributed four Megiddo capitals (M2, M4, M5, and M11) directly to this tenth-century Stratum VA–IVB city, associating M4 and M5 with the southern complex of Gate 1567 and Palace 1723 (Shiloh 1979: 20–21; Shiloh 1979: 22; Shiloh 1993: 1017). He further argued that fifteen capitals across the northern kingdom (seven at Samaria, six at Megiddo, and two at Hazor) functioned in mid-ninth-century BCE buildings erected under King Ahab (Shiloh 1979: 21). Because the Type A capitals found in secondary Stratum III–II contexts above Megiddo Stratum IVA Building 338 (M1, M3, M6, M8, and the bifacial M9) shared the same typological class as Stratum VA–IVB examples, and because no earlier monumental building stood underneath Building 338, Shiloh proposed that several of those capitals had originally stood in the *bit-hilani* entrance porch of Stratum VA–IVB Palace 6000 before being looted and transferred along with ashlar blocks into Building 338 (Shiloh 1979: 5; Shiloh 1979: 6; Shiloh 1979: 6; Shiloh 1979: 21).

In recent decades, Israel Finkelstein, Oded Lipschits, and Assaf Kleiman have rejected the tenth-century Solomonic attribution, lowering the date of Megiddo Stratum VA–IVB and the initial appearance of northern volute capitals to the first half or middle of the ninth century BCE under the Omride dynasty (Lipschits 2011: 204–205; Lipschits 2011: 205; Kleiman 2022: 190; Finkelstein 2025: 213). Excavations at the Megiddo gates in 2018 and 2022 confirmed that the six-chambered gate of Stratum VA–IVB was constructed in the late Iron Age IIA (ninth century BCE) during the reign of the Omride monarchs, suffered damage during an Aramaean destruction, and was repaired around 800 BCE (Finkelstein 2025: 213). Kleiman emphasizes that early volute capitals in northern Israel always appear near Iron Age IIA monumental structures, such as Palace 1723 at Megiddo and Citadel 3090 at Hazor, and never in association with Iron Age I buildings (Kleiman 2022: 190). At Samaria and Hazor, significant Iron Age I occupation is absent, while at Megiddo and Tel Dan, heavy destruction layers separate the Iron Age I levels from the later strata containing the capitals (Kleiman 2022: 190).

Even within this ninth-century framework, a rigorous critique of find-spots reveals that most northern capitals were recovered from eighth-century (Iron Age IIB) or later secondary contexts (Lipschits 2011: 205–206; Lipschits 2011: 205–206; Kleiman 2022: 190; Kleiman 2022: 191–192). Kleiman notes that the only published capitals securely assignable to a pre-eighth-century (late Iron Age IIA) origin are the two Type D capitals at Hazor (H1 and H2), which

originally adorned Stratum VIII Citadel 3090 before being reused in Stratum VII Room 3264 in the early eighth century BCE (Lipschits 2011: 206; Kleiman 2022: 190; Kleiman 2022: 191–192; Kleiman 2022: 197). At Megiddo, while David Ussishkin assigned the Type B capitals M4 and M5 to late Iron Age IIA Palace 1723, both were excavated in secondary use within Iron Age IIC (Stratum III) structures, and nearly all Type A capitals (M1, M2, M3/M8, M6, and M9) were uncovered around Stratum IVA Building 338 or in overlying Stratum III–II walls (Shiloh 1979: 5; Lipschits 2011: 205–206; Kleiman 2022: 191–192). Similarly, the Tel Dan capitals cannot be dated to the ninth century because the site lacks a late Iron Age IIA stratum: D1 was reused in an Iron Age IIB wall (Wall 6033) at the upper gate, and D2 was found in the Iron Age IIB destruction layer of Locus 5133 near the gateway entrance (Lipschits 2011: 206; Lipschits 2011: 206–207; Kleiman 2022: 191–192). At Samaria, finally, all seven capitals were recovered in secondary contexts, including three (S1–S3) near the southeastern acropolis associated with Strata II–I and four fragments embedded in Persian, pre-Hellenistic, Hellenistic, and Roman theater walls (Lipschits 2011: 205–206; Kleiman 2022: 191–192).

4. The Southern Group and the Assyrian Imperial Hypothesis

A pronounced typological and chronological divide separates the volute capitals of the Kingdom of Israel from the southern group uncovered in the kingdoms of Judah, Moab, and Ammon (Lipschits 2011: 218). In Judah, Yohanan Aharoni's excavations at Ramat Rahel unearthed ten capitals and fragments (Shiloh's RR-1 through RR-10), including four complete examples: RR-1 and RR-2 near the southern casemate wall of the Stratum VA palace courtyard (with RR-2 reused in a Persian-period wall), RR-8 near eastern Gate 375, and RR-10 in secondary use in Herodian Columbarium 800 (Shiloh 1979: 10; Lipschits 2011: 209; Lipschits 2011: 209). Subsequent renewed excavations added three further fragments at Ramat Rahel (Lipschits 2011: 210). In nearby Jerusalem, Kathleen Kenyon recovered two fragments of a single finely carved capital out of context in a secondary accumulation of ashlar stones in Area P (Square A XVIII) on the eastern slope of the City of David below a fifth-to-third-century BCE level (Lipschits 2011: 212; Ein Mor and Ron 2016: 139). Across the Jordan in Moab, five limestone capitals were documented at the basalt fortress of Khirbet el-Mudeibi, located 21 kilometers southeast of el-Kerak along the Fajj al-Usaykir route: one found on the surface by Nelson Glueck, three recorded by Ivan Negueruela in 1982 (two of which were fully exposed in 2001), and a fifth excavated face down in 1997 beneath the supporting wall of the four-chamber gate in Area B (Stern and Aviram 1993b: 1846; Lipschits 2011: 213–215; Lipschits 2011: 214–215; Lipschits 2011: 215). An additional Moabite capital was identified in 1983 embedded in a modern garden wall at Ain-Sara west of el-Kerak, and two fragments were found on the Amman citadel in Ammon, comprising a bifacial fragment reused in an Umayyad wall excavated in 1993 and a narrower single-outlined fragment lacking oculi displayed at the Amman Fort museum in 2001 (Lipschits 2011: 216; Lipschits 2011: 216–217; Lipschits 2011: 217).

Stylistic comparisons demonstrate that seven of the eight Moabite and Ammonite capitals

align closely with the Judahite corpus from Ramat Rahel and the City of David (Lipschits 2011: 217; Franklin 2023: 167). Analyzing the five Khirbet el-Mudeibi capitals alongside the Ramat Rahel and City of David examples, Negueruela observed that all three groups share the same basic layout of an upper abacus and lower base framing a central triangle, lateral volutes, and upper flanking oculi (Lipschits 2011: 215). At the same time, Negueruela and Oded Lipschits identified consistent regional variations that distinguish the Transjordanian carvings from their Judahite counterparts (Lipschits 2011: 215; Lipschits 2011: 217). Whereas the Ramat Rahel and City of David capitals feature a central triangle framed by three parallel relief lines and retain upper and lower leaves flanking the volutes, the Khirbet el-Mudeibi, Ain-Sara, and Umayyad-context Amman capitals construct the central triangle with a double outline, separate the triangle's base line from its sides, omit the flanking leaves and abacus notch, and enlarge the central triangle so that the smaller three-line volutes are pushed toward the outer edges (Lipschits 2011: 215; Lipschits 2011: 216; Lipschits 2011: 217; Ein Mor and Ron 2016: 139; Ein Mor and Ron 2016: 139–140). These variations indicate that local stonecutters in Judah and Transjordan worked in two principal regional workshops, adapting a shared architectural model to local masonry traditions (Lipschits 2011: 215; Lipschits 2011: 218).

Yigal Shiloh originally dated the Ramat Rahel, Jerusalem, and Khirbet el-Mudeibi capitals to the ninth century BCE, arguing from Yigael Yadin's linkage of Ramat Rahel to Queen Athaliah and Aharoni's ninth-century date for Stratum VB that the capitals were carved for Stratum VB and reused in Stratum VA alongside contemporaneous northern Israelite examples (Shiloh 1979: 10; Lipschits 2011: 211; Lipschits 2011: 212–213; Lipschits 2011: 215–216). Stratigraphic data from the renewed Ramat Rahel excavations, however, place the first monumental building phase and its volute capitals in the late eighth or early seventh century BCE, following the Assyrian subjugation of Judah and the destruction of Lachish in 701 BCE (Lipschits 2011: 212; Lipschits 2011: 212–213;). By typological extension, Lipschits assigns the City of David capital and the Khirbet el-Mudeibi gate capitals to the same late eighth- or early seventh-century BCE horizon, questioning whether the 760 ± 40 BCE radiocarbon date from wooden gate beams at Mudeibi dates the construction of the gate itself (Lipschits 2011: 212–213; Lipschits 2011: 216; Kletter 2015: 60).

To explain why southern volute capitals emerged some 150 years after their Omride prototypes and only after the Assyrian conquest of the Kingdom of Israel in 732–722/720 BCE, Lipschits rejects refugee migration or indirect Transjordanian transmission, noting that the capitals are uncharacteristic of local architecture and cluster in isolated administrative fortresses like Ramat Rahel and Khirbet el-Mudeibi rather than in the royal capitals (Lipschits 2011: 212; Lipschits 2011: 218; Lipschits 2011: 218; Lipschits 2011: 218–219; Lipschits 2011: 222). Instead, he proposes that Assyrian rulers encountered and admired the northern Israelite capitals during their campaigns and incorporated the motif into royal garden architecture at Sargon II's palace at Dur-Sharrukin (Khorsabad) and Sennacherib's and Ashurbanipal's palaces at Nineveh, as illustrated on Room H Slab 8 (Panel WA124939) from Nineveh, where four smooth round columns crowned with volute capitals support a crenellated pavilion on an aqueduct-watered garden hill

(Lipschits 2011: 219; Lipschits 2011: 221; Lipschits 2011: 221–222; Lipschits 2011: 222). Under Assyrian sponsorship or encouragement, this imperial style was then introduced into administrative and tax-collection centers or garrison fortresses in the vassal kingdoms of Judah, Moab, and Ammon surrounding the province of Samaria (Lipschits 2011: 219; Lipschits 2011: 221–222; ; Na’aman 2023: 214). Raz Kletter and Reli Avisar, however, counter that volute capitals are completely absent from major Assyrian provincial centers in the southern Levant such as Megiddo and southern coastal sites, arguing on the basis of earlier shrine models that the southern capitals represent a continuous local Levantine tradition rather than an Assyrian import (Kletter 2015: 60; Avisar 2025: 11).

5. Architectural Reconstruction: Pilasters, Free-Standing Columns, or Non-Structural Bases?

Because not a single Iron Age volute capital has ever been excavated in primary position within its original building, reconstructing how these carved limestone blocks functioned in Levantine architecture presents three interrelated difficulties: attributing displaced stones to specific structures, locating them within building plans whose superstructures have vanished, and determining how they stood and were attached to surrounding walls or columns (Betancourt 1977: 30; Shiloh 1979: 6; Shiloh 1979: 21). Early excavators at Megiddo and Samaria, guided by Carl Watzinger and the analogy of sixth-century BCE rock-cut reliefs imitating pilaster-framed doorways in Cypro-Archaic II Royal Tombs 5 and 12 at Tamassos on Cyprus, assumed that the stones served as load-bearing capitals crowning rectangular pilasters or free-standing columns (May 1935: 10–11; Shiloh 1979: 6; Franklin 2023: 168). For the group of five capitals associated with Megiddo Stratum IVA Building 338, Herbert Gordon May, P. L. O. Guy, Robert S. Lamon, and Geoffrey M. Shipton noted that the blocks were dressed on one long face and both narrow sides with rectangular abaci and necking matching the width of the rubble podium, leading May to restore twelve engaged pilasters flanking six major doorways to carry multi-beam wooden or stone lintels (May 1935: 60; Shiloh 1979: 6). While Lamon and Shipton suggested that the double-faced ornament on capital M9 resulted from masons abandoning a spoiled preliminary carving on one side and finishing the back instead, Yigal Shiloh pointed to two additional bifacial Megiddo capitals, M10 and M12, to argue that double-faced examples stood atop free-standing pillars, such as a central pillar capped by M9 flanked by engaged pilasters carrying unifacial capitals like M8 (May 1935: 10–11; Shiloh 1979: 6).

The debate over structural placement reached its sharpest focus with the two largest stones in the Megiddo corpus, M4 and M5, catalogued by the Oriental Institute as M5339 and M5340 and recovered in secondary Stratum III contexts near the southern compound of Palace 1723 and Gateway 1567 (Betancourt 1977: 30; Shiloh 1979: 6–7; Franklin 2011: 135–137). Both blocks share squat proportions with a width-to-height ratio exceeding four to one, measuring 57 cm high, 244 cm and 239 cm long, and 57 cm and 56 cm wide, with base lengths reaching 140

cm (Betancourt 1977: 30; Shiloh 1979: 6–7; Franklin 2011: 135–137). Although matched in size, M5 bears a carved volute face whereas M4 is smooth on both front and back, displaying relief carving only on its narrow side petals (Betancourt 1977: 30; Franklin 2011: 135–137). In the first classic reconstruction, advanced by Lamon and Shipton and endorsed by Shiloh, the two blocks were assigned to the four-chambered Gateway 1567 piercing the northern wall of Courtyard 1693 (Lamon and Shipton 1939: 15; Betancourt 1977: 30–31; Shiloh 1979: 6–7; Ussishkin 1994: 415). At the northern end of Gateway 1567, wall projections extended approximately 0.35 meters inward from the north-south walls, and their width of roughly 1.5 meters matched both the northern east-west walls of the gate and the 1.4-to-1.5-meter base length of the capitals (Betancourt 1977: 30–31; Shiloh 1979: 6–7). Positioned atop these projections as doorjamb capitals, the stones would have stood tangent to the main wall along their backs while jutting out some 54 cm to carry a lintel across the passage (Betancourt 1977: 30–31; Shiloh 1979: 6–7).

David Ussishkin proposed an influential alternative reconstruction that relocated M4 and M5 from the gateway to the northern facade of Building 1723 inside the enclosure, restoring Area H as a monumental entrance porch modeled on a North Syrian *bit-hilani* palace (Betancourt 1977: 31; Betancourt 1977: 32; Shiloh 1979: 6–7). By analogy with North Syrian *bit-hilani* architecture, in which a columned portico flanked by a tower and a square room leads into a long reception hall parallel to the facade, Ussishkin restored a porch in Area H featuring two free-standing pillars between two engaged pilasters (Betancourt 1977: 31; Betancourt 1977: 32). To explain why one block was carved and the other left plain, Ussishkin analyzed the cuttings on their upper surfaces, which consist of sunk central semicircles and dowel holes (Betancourt 1977: 30; Betancourt 1977: 31). Because the undecorated block M4 possessed two pairs of dowel holes alongside a central hole at the semicircular depression, Ussishkin argued that it crowned one of the free-standing pillars, where both long faces were visible and dowels on either side secured the overhead lintel beam (Betancourt 1977: 30; Betancourt 1977: 31). Conversely, the carved block M5 had only two dowel holes near the edge of its decorated face because it rested on an engaged pilaster at the side of the porch, where the lintel beam rested only on the outer half of the stone (Betancourt 1977: 30; Betancourt 1977: 31). Orienting all four putative capitals with their 1.5-meter bases matching the estimated wall thickness and their long axes parallel to the portico jambs allowed the carved narrow ends of even the smooth block to face the viewer (Betancourt 1977: 31; Betancourt 1977: 31–32).

In a radical functional reassessment, Norma Franklin rejected both structural reconstructions, arguing that none of the roughly 55 stone volutes from ancient Israel and Judah ever served as load-bearing architectural capitals (Franklin 2011: 138–139; Franklin 2023: 169). Pointing out that both Gate 1567 and Palace 1723 preserved only lower courses or built-up foundations of ashlar masonry beneath mudbrick superstructures, Franklin noted that M4 and M5 weighed approximately two tons each and could not have perched atop mudbrick walls prior to late seventh-century BCE engineering advances (Ussishkin 1994: 415; Franklin 2011: 135–137; Franklin 2023: 169). When M4 and M5 are placed back-to-back on the ground with the carved face of

M5 exposed, their offset upper semicircular depressions join to form a complete circle flanked equidistantly by three pairs of 7-to-10-cm-deep mortices, comprising two sets on M4 and one on M5 (Franklin 2011: 135–137; Franklin 2023: 160–161). In Franklin’s reading, the paired blocks formed a single monumental stone base that guided and secured a tenoned wooden column or cultic palm-tree pole, an arrangement paralleled by the volute-based palm pole on the ninth-century BCE Šamaš Tablet from Sippar and the metal-sheathed wooden palm poles flanking the Sin and Šamaš temple entrances at Khorsabad (Franklin 2023: 160–161; Franklin 2023: 161). Across the wider corpus, Franklin argues that stone volutes were united by their decorative motif rather than a single architectural role, serving variously as wall-protecting orthostats like the Khirbet el-Mudeibi gate stones (Md1–Md6) and the ninth-century BCE basalt Relief F15 in the Ain Dara temple ambulatory, as composite stone-and-wood window balustrades like the dowelled Jerusalem City of David stone (J1) and the small lathed balustrade pillars at Ramat Rahel and Armon Ha-Natziv, as supports for wooden standards or cultic icons at Ramat Rahel, and as non-structural ritual votive capitals or stele crowns exemplified by Ramat Rahel RR5, Armon Ha-Natziv AH1–AH3, and roughly 81 seventh-to-fifth-century BCE Cypriot stele crowns (Franklin 2011: 138; Franklin 2011: 138; Franklin 2011: 138; Billig et al. 2022: 23; Franklin 2023: 168; Franklin 2023: 169; Franklin 2023: 169).

6. Afterlives and Cultural Biography: The Case of Hazor Area B

Among the entire Levantine corpus, the two Type D volute capitals unearthed in Area B at the western tip of Tel Hazor (H1 and H2) offer the clearest case study for reconstructing the cultural biography and ritual afterlife of Iron Age stone monuments (Shiloh 1979: 1–2; Kleiman 2022: 191; Ben-Ami 2024: 212–213). Carved from local nari limestone and weighing roughly 1.5 to 2 tons apiece, both capitals were originally installed during the late Iron Age IIA in Stratum VIII at the main northern entrance to Citadel 3090, a rectangular ashlar-built complex measuring 25 by 21.5 meters (Betancourt 1977: 29; Kleiman 2022: 191; Kleiman 2022: 191–192). Because H1 was carved on one face and H2 on both faces, Yigael Yadin restored them at the portal leading into paved Courtyard 3318 atop an engaged pilaster base abutting the northern citadel wall and a free-standing square pillar base in the center of the passage, associating them with a 2.45-meter stone lintel found about 5 meters from their findspot and a 60 by 60 by 240 cm monolith reused in a Stratum V wall (Betancourt 1977: 29; Shiloh 1979: 1–2; Kleiman 2022: 193).

Both capitals were discovered not in Citadel 3090, however, but resting in good condition on the ground inside Room 3264 of Stratum VII, positioned at a perpendicular angle beside a clay oven (Kleiman 2022: 191; Ben-Ami 2024: 208; Ben-Ami 2024: 209). Yadin and Yigal Shiloh interpreted this secondary context as a utilitarian “oven shelter” where later squatters or laborers reused the fallen capitals as wind blockers after the citadel fell into ruin, citing the arrangement

as proof of urban collapse in Stratum VII (Shiloh 1979: 1–2; Stern and Aviram 1993a: 602; Kleiman 2022: 193; Ben-Ami 2024: 208). Recent studies by Assaf Kleiman and Doron Ben-Ami reject this squatters hypothesis on both practical and stratigraphic grounds (Kleiman 2022: 193; Ben-Ami 2024: 209). Dragging two intact 1.5-to-2-ton monuments roughly 7 meters from the citadel entrance required organized labor disproportionate to shielding a domestic oven, which itself stood almost completely intact only centimeters from the stones (Kleiman 2022: 193; Ben-Ami 2024: 209). Furthermore, renewed excavations demonstrate architectural continuity across Hazor’s citadel, fortifications, and water system from Stratum VIII until the city’s destruction in Stratum V, ruling out a squatters phase in the city’s political hub (Kleiman 2022: 193).

In place of domestic reuse, Kleiman reconstructs a three-stage cultural biography linked to shifting geopolitical control in the Hula Valley (Kleiman 2022: 187–189; Kleiman 2022: 192–193). Following primary display at the entrance of Citadel 3090 in Stratum VIII, which Kleiman associates with late ninth-century BCE Aramean royal remodeling under Hazael of Aram-Damascus, the capitals underwent deliberate appropriation in Stratum VII when they were relocated into Building 3264, a small structure containing two walls (W3715 and W3716), a stone bench, an oven, and complete Iron Age IIB vessels (Kleiman 2022: 187–189; Kleiman 2022: 192; Kleiman 2022: 192–193; Kleiman 2022: 196–197). In the third stage, during the renovation of Stratum VI only a few decades later, Building 3264 and the capitals were intentionally buried beneath a 66 cm artificial fill that supported paved Courtyard 3180, concealing the monuments from view in a manner comparable to Near Eastern burials of politically charged statues (Kleiman 2022: 191; Kleiman 2022: 192; Kleiman 2022: 192–193; Kleiman 2022: 195).

Complementing this biographical framework, Ben-Ami demonstrates that the placement and burial of the capitals inside Enclosure 3264 were governed by the long-term sacred topography of Square 3270, a ceremonial plaza exceeding 200 square meters east of Citadel 3090 (Ben-Ami 2024: 212–213; Ben-Ami 2024: 213). Separated by only 0.4 to 0.8 meters of fill, Enclosure 3264 replicated the plan of a buried Iron Age I (Stratum XI) cultic sanctuary directly underneath it: walls W3715 and W3716 coincided with Stratum XI walls W3745 and W3747, southern capital No. 1 aligned over wall W3746, and the angled join of capital No. 2 matched the early sanctuary’s recumbent standing stone (Ben-Ami 2024: 211). The intentional sealing of Enclosure 3264 and adjacent Room 3272—where a complete cooking pot and five sack-shaped storage jars remained intact on the floor—constituted a reverential ritual burial of divine gate symbols comparable to the buried Syro-Hittite portal lions at Zincirli, preserving the hallowed open space of Square 3270 from Stratum XI until hasty defensive construction erected Building 3148a on the eve of Stratum VA’s destruction (Ben-Ami 2024: 213; Ben-Ami 2024: 213–214; Ben-Ami 2024: 214; Ben-Ami 2024: 214–215).

7. Conclusion: Synthesis and Future Directions

Over more than a century of scholarship since Gottlieb Schumacher's 1903 discovery at Megiddo, the study of carved Iron Age limestone volutes has moved steadily away from Classical teleology and literal biblical correlation toward contextual Levantine analysis (Betancourt 1977: 4; Lipschits 2011: 204; Franklin 2023: 156). Early researchers who coined the terms **Proto-Ionic** and **Proto-Aeolic**, influenced by the Cypro-Archaic II rock-cut revetment reliefs in Tombs 5 and 12 at Tamassos, treated eastern monuments as evolutionary precursors to Greek architectural orders and assumed that all carved blocks served as load-bearing structural capitals (Betancourt 1977: 4; Franklin 2023: 156; Franklin 2023: 168). Mid-twentieth-century syntheses by Yigael Yadin and Yigal Shiloh broke with this Aegean framework and demonstrated that the palm-tree or **tree of life** motif and full ashlar masonry belonged to an indigenous Syro-Palestinian and Mesopotamian artistic repertoire, yet their proposed **Palmetto** (*timorah*) and **Israelite** labels remained tied to a tenth-century BCE chronology anchored in Solomon's building program in 1 Kings 9:15 (Yadin 1958: 80; Shiloh 1979: 42; Shiloh 1979: 83; Lipschits 2011: 204). The subsequent adoption of Antonia Ciasca's neutral term **volute capital** by Burkhardt Wesenberg, Philip Betancourt, and Oded Lipschits, alongside Norma Franklin's functional designation **stone volutes**, marks a methodological shift that separates visual iconography from presumed ethnic, biblical, or structural roles (Betancourt 1977: 4; Lipschits 2011: 204; Franklin 2023: 156; Franklin 2023: 169).

Integrating revised Iron Age stratigraphy, imperial history, and object biography resolves the chronological and architectural anomalies that long divided the field (Lipschits 2011: 204–205; Kleiman 2022: 187–189; Franklin 2023: 169). In the northern Kingdom of Israel, where 27 capitals have been found across Megiddo, Samaria, Dan, Hazor, and Mount Gerizim, initial production is now situated in mid-ninth-century BCE Omride state formation, when dynastic rulers erected monumental ashlar complexes to project legitimacy across ethnically diverse borderlands and agricultural valleys (Finkelstein 2000: 132; Lipschits 2011: 204–205). Following the late eighth-century BCE Assyrian conquest of Israel, Assyrian rulers incorporated volute-crowned columns into royal garden pavilions depicted on reliefs at Khorsabad and Nineveh and mediated the motif's late eighth- and seventh-century BCE appearance at administrative fortresses in the vassal kingdoms of Judah (Ramat Rahel and Jerusalem), Moab (Khirbet el-Mudeibi), and Ammon (the Amman citadel) (Lipschits 2011: 204; Lipschits 2011: 221; Lipschits 2011: 221–222; Franklin 2023: 167). Future research must build on two complementary directions highlighted by recent work: re-examining mortices, dimensions, and mudbrick superstructures to distinguish gate-protecting orthostats, window balustrades, paired wooden-pillar bases, and votive stele crowns (Franklin 2023: 169; Franklin 2023: 169), and tracing the secondary appropriation and intentional ritual burial of monuments at sites like Hazor Area B and Armon Ha-Natziv to uncover political transitions and sacred topographies invisible in destruction layers alone (Kleiman 2022: 196; Franklin 2023: 169; Ben-Ami 2024: 213–214; Ben-Ami 2024: 214–215).

Note on this essay

This essay was written by Gemini 4 Argon through Agent Bayes project chat on 2026-10-14, from a library of indexed papers on Iron Age Levantine architecture, at medium reasoning with deep library search. The model was first asked to find the key debates on the topic, then to suggest a title and an outline for an essay of about 4,500 words, and then to write each section, the core sections first, the conclusion next, and the introduction last. The prompts name the topic and the task only. Every model in this comparison received the same prompts. The prose is printed as written, except that paragraphs addressed to the reader about drafting were removed. Every page number was checked against the stored page text of its source and converted to the page number printed in the publication. The positions summarized here may be contested, and the essay does not reflect the opinion of any particular author.

Agent Bayes System

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