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The Stone Mounds of Upper Mesopotamia: How G bekli Tepe Proved Hunter-Gatherers Settled Down

History * Archaeology * Anthropology

1. Introduction: A Prehistoric Paradigm Shift in Hunter-Gatherer Society

For nearly a century, the standard model of the Neolithic Revolution posited a strict linear progression of societal evolution: plant and animal domestication was assumed to be the prerequisite for permanent human settlement, social stratification, and monumental architecture.[1] Excavations at G bekli Tepe, situated fifteen kilometers northeast of anl urfa in southeastern Turkey, have systematically dismantled this paradigm.[2] Occupied during the Pre-Pottery Neolithic A and B periods (circa 9500-8000 BCE), the site predates writing, metallurgy, the wheel, and verified agricultural domestication by millennia, yet preserves the oldest monumental megalithic architecture in the archaeological record.[1]

Initially popularized in the late twentieth century as an isolated ritual sanctuary or the world's "first temple" visited solely by nomadic foragers, G bekli Tepe has undergone a profound re-evaluation through mid-2020s geoarchaeological, archaeobotanical, and remote-sensing investigations.[1][3] Far from an empty ceremonial outpost, it functioned as a permanent, bustling settlement at the center of an interconnected Holocene cultural landscape known as the Ta Tepeler ("Stone Mounds").[7]

2. Historiography, Stratigraphy, and Geometric Engineering

First noted in 1963 during a survey by Halet ambel and Robert Braidwood -- who mistook its surface limestone slabs for a medieval cemetery -- G bekli Tepe was recognized in 1994 by German archaeologist Klaus Schmidt based on parallels with the Pre-Pottery Neolithic megaliths of Neval ori.[2][4][11] Formal excavations launched in 1995 by the anl urfa Museum and the German Archaeological Institute revealed a fifteen-meter-high, nine-hectare artificial tell.[2] Directed since 2020 by Necmi Karul within the broader anl urfa Neolithic Research Project, ground-penetrating radar confirms that over 95% of the mound remains unexcavated, with 2025-2026 seasons uncovering anthropomorphic statues and extensive domestic quarters on the eastern and southern slopes.[2][5][7][11]

| Stratigraphic Level | | Chronological Period | | Architectural Characteristics | | Megalithic Features |

| Level III | | PPNA to Early PPNB (c. 9500 BCE) | | Circular/oval enclosures (10-30 m diameter) with concentric walls and south/southeast U-stone portals.[3][6] | | Bilaterally symmetrical T-shaped limestone pillars up to 5.5 m tall (10-22 metric tons) set in bedrock pedestals with high-relief animal carvings.[4] |

| Level IIA | | Middle PPNB (c. 7500 BCE) | | Sub-rectangular rooms (~5 x 3 m) with

burnt-lime calcite terrazzo floors and stone benches.[3][6] | | Smaller, largely undecorated pillars (1.4-2 m tall) integrated into wall buttresses.[6] |

| Level IIB | | Late PPNB Transition | | Unassuming ovoid domestic structures matching regional residential traditions.[6] | | Absence of monolithic T-pillars; shift toward utilitarian domestic architecture.[6] |

The towering Level III T-pillars represent stylized anthropomorphic beings with carved arms, hands resting on belts, and loincloths.[12][16] Rather than accreting haphazardly, Enclosures B, C, and D were laid out simultaneously according to an abstract geometric master plan.[12] Standard-deviation spatial mapping of thirty-two wall points in Enclosure C identifies a statistical center exactly midway between the southern faces of the two central pillars, with equal 2.8-meter intervals linking the center, inner pillar faces, and peripheral wall.[12] Furthermore, the central pillars of Enclosures B, C, and D form a precise equilateral triangle, proving that specialist architects planned multiple enclosures concurrently.[12]

3. Megalithic Logistics, Domestic Settlement, and Subsistence

Quarrying 10-to-22-ton monoliths required cutting U-shaped channels into the adjacent limestone plateau using flint tools before splitting the stone with wooden wedges and hauling the blocks 100-500 meters uphill.[4][6] Without draft animals or wheels, mobilizing hundreds of workers relied on cooperative "work feasts."[4][18] Excavations uncovered stone vats holding up to 160 liters -- suited for fermented cereal beverages -- and massive middens of butchered animal bones from communal gatherings.[10][18]

While Schmidt's original "temple hypothesis" cast the enclosures as unroofed pilgrimage sanctuaries devoid of habitation, E.B. Banning and subsequent excavations demonstrated that Early Neolithic societies wove symbolism directly into residential life, much like atalh y k, Jerf al-Ahmar, and Neval ori.[1][6] Subsurface scanning across G bekli Tepe's slopes, alongside rock-cut water cisterns, hearths, glossed sickle blades, and thousands of basalt grinding stones, confirms a permanently inhabited village.[1][5][19]

| Mammalian Species | | Specimen Count (NISP) | | Subsistence and Dietary Role |

| Goitered Gazelle (Gazella subgutturosa) | | 7,949 | | Most numerous game (~15% of total meat mass); hunted in seasonal midsummer-to-autumn pulses.[19][24] |

| Aurochs (Bos primigenius) | | 2,574 | | Provided ~50% of total animal protein; centerpiece of communal work feasts.[24] |

| Wild Sheep / Mouflon (Ovis orientalis) | | 1,237 | | Morphometrically wild populations; adult male bias confirms hunting rather than herding.[24] |

| Asiatic Wild Ass (Equus hemionus) | | 1,177 | | Major steppe protein resource.[25] |

| Wild Boar (Sus scrofa) | | 863 | | Hunted in humid riparian gallery forests.[25] |

During the early Boreal period, a humid steppe-forest ecosystem supported abundant wild game.[6] Analysis of over 38,000 mammalian bones confirms targeted hunting of adult male ungulates rather than domesticated herds.[23][24] Concurrently, enclosure

sediments contain 0.5 to 3.0 million phytoliths per gram from wild einkorn (Triticum monococcum) and wild barley (Hordeum spontaneum).[19][29] Because tough-rachis domesticated chaff did not exceed 10% in this region until 400-1,000 years after southern Syria, G bekli Tepe's builders sustained sedentism through intensive pre-agricultural foraging.[28]

4. The Ta Tepeler Network, Geoarchaeology, and Archaeoastronomy

The anl urfa Neolithic Research Project has contextualized G bekli Tepe within at least twelve contemporaneous settlements across a 200-kilometer network.[7] Across these sites, iconography evolved markedly over 1,500 years:[17]

| Ta Tepeler Site | | Architectural Features | | Iconographic Evolution |

| G bekli Tepe | | Surface-built circular enclosures and giant T-pillars.[6] | | Dominated by dangerous wild fauna (snakes, scorpions, vultures); abstract, faceless human pillars.[6][16] |

| Karahantepe | | Bedrock-carved chambers and sunken "Pillar Pit" with 11 phallic pillars.[31] | | Realistic human sculptures, including a 2.3 m seated male statue with facial features and v-neck motif.[31] |

| Saybur | | Subterranean communal structures (12 m diameter) with benches.[34] | | 3.7 m continuous narrative wall relief showing a man flanked by leopards and another confronting a bull.[34] |

| Sefertepe & Kurt Tepesi | | Subterranean enclosures and transitional forager-settler architecture.[31] | | High- and low-relief human faces on dressed blocks and carved serpentinite beads.[31] |

Whereas early G bekli Tepe art situated faceless humans within an untamed zoomorphic cosmos, later sites like Karahantepe and Saybur foreground realistic human figures subduing wild beasts -- a cognitive shift toward anthropocentrism that preceded altering the genetics of crops and livestock.[7][17][32][34]

Geoarchaeological investigations have also overturned two persistent myths. First, the enclosures were not intentionally backfilled in a single ritual act; micro-stratigraphy, air pockets, and collapsed wooden roof-beam impressions prove that seismic activity and winter rains triggered catastrophic slope-slides of upper-slope middens into the lower buildings.[3][20][39] Inhabitants repeatedly repaired walls, erected terraces (Phase 5), and recycled fallen pillars in a centuries-long process of "ruin interaction" extending into the modern Anthropocene excavation horizon.[3][40] Second, claims by Martin Sweatman and Dimitrios Tsikritsis that Enclosure D's Pillar 43 ("Vulture Stone") encodes a 10,950 BCE Younger Dryas comet impact are refuted by the excavation team: radiometric dating of Enclosure D wall plaster is over a millennium younger, pillars were repositioned and roofed over time, and selective constellation matching ignores the broader animistic fauna.[3][41][42][43][44][45]

5. Conclusion: Collective Memory Before Agriculture

G bekli Tepe and the wider Ta Tepeler network demonstrate that permanent settlement, geometric architectural planning, and monumental art did not require an agricultural

surplus.[1][7] Instead, the cooperative labor, intensive wild cereal harvesting, and communal feasting required to build and maintain these stone mounds forged the social and cognitive foundations that made the Neolithic Revolution possible.[7][18][19]

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