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THE AGRICULTURAL DAWN: A COMPREHENSIVE STUDY OF NEOLITHIC SITES IN TELANGANA

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Abstract
This study presents a comprehensive archaeological synthesis of the Palaeolithic and Neolithic horizons of Telangana, tracing human adaptation, technological evolution, and settlement patterns across the Deccan Plateau during the Pleistocene and early Holocene epochs. Drained by the critical Godavari and Krishna River basins, Telangana's unique topography served as a vital ecological refuge and a hub for early hominin activity.

During the Lower Palaeolithic period, hominins relied heavily on coarse Dharwar quartzites to manufacture heavy-duty Acheulean handaxes and cleavers along major river terraces. As climatic fluctuations triggered the Middle and Upper Palaeolithic transitions, tool technologies shifted toward prepared-core Levallois methods and precision, punch-driven prismatic blade production. This transition was accompanied by a deliberate material pivot toward fine-grained cryptocrystalline silicas like chert and jasper.

By the third millennium BCE, the region underwent an economic revolution marked by the Southern Neolithic complex. Early populations abandoned nomadic foraging for settled agro-pastoralism, establishing permanent wattle-and-daub villages anchored around castellated granitic hills (guttas). This era introduced ground dolerite axes, advanced ceramic industries, infant urn burials, and the enigmatic vitrified ash mound tradition driven by large-scale cattle pastoralism. Ultimately, Telangana's prehistoric archive offers a profound record of cognitive resilience and technological ingenuity in South Asian prehistory.

Keywords: Palaeolithic, Neolithic, Agropatoralism, Handaxe, Levalois, etc.

Introduction

The Neolithic period in Telangana marks one of the most transformative chapters in the region's prehistory, signaling the definitive transition from a nomadic hunter-gatherer lifestyle to settled, food-producing agrarian economies. Dating roughly between 3000 BCE and 1000 BCE, this epoch witnessed the birth of the earliest villages on the Deccan Plateau. Hominins and anatomically modern humans, who had spent millennia relying on the seasonal availability of wild game and plants, began to actively domesticate animals, cultivate indigenous crops, clear forest tracts, and establish long-term settlements. The landscape of Telangana—defined by its distinct granitic hill formations (guttas), expansive river valleys, and rich black and red soils—offered an ideal setting for this economic revolution. This study provides an exhaustive examination of the Neolithic horizon of Telangana, exploring the geographic distribution of key sites, the unique "Southern Neolithic" ash mound tradition, technological shifts in tool production, ceramic typologies, subsistence strategies, and the emergence of early socio-spiritual behaviors.

Geographic and Eco-Environmental Framework

The distribution of Neolithic settlements across Telangana was strictly dictated by the state's distinct geology and ecological zones. Unlike the preceding Palaeolithic hunter-gatherers, who frequently left

tools along high-energy river beds and gravel terraces, Neolithic communities sought out specific landscape features that combined protection, raw materials, and agricultural potential.

The most characteristic feature of Telangana's Neolithic sites is their close association with castellated granitic hills and tors. These hills, rising dramatically above the surrounding plains in districts like Mahabubnagar, Nalgonda, Karimnagar, and Warangal, offered several distinct advantages:

Natural Enclosures: The massive granite boulders formed natural windbreaks and defensive enclosures, creating flat saddle areas and summits perfectly suited for building circular mud huts.

Proximity to Raw Materials: These granitic complexes were frequently intersected by dolerite and basalt dykes. Dolerite was the essential raw material required for manufacturing ground and polished stone axes—the defining tool technology of the Neolithic age.

Rainwater Harvesting: The natural depressions within the granite rocks formed rock-pools that trapped monsoonal rainwater, providing a reliable water supply elevated safely above the malaria-ridden, flood-prone primary river beds.

Soil and Vegetation Matrices

Neolithic pioneers in Telangana settled predominantly in areas featuring red sandy soils (Chaluka) and pockets of regur (black cotton soil) found in intermontane basins. The natural vegetation of the era—primarily dry deciduous forests and thorny scrub jungles—was systematically cleared using polished stone axes and controlled burning to create fields for millet cultivation and open pastures for cattle grazing.

Technology and Material Culture

The shift to a sedentary, agricultural lifestyle triggered an explosion in material culture. The Neolithic populations of Telangana developed specialized tool kits and domestic equipment engineered to process plants, clear forests, cook food, and store seasonal surpluses.

The Polished Stone Industry (Ground Stone Tools)

The definitive technological marker of the Telangana Neolithic is the ground and polished stone celt (axe). Unlike the flaked tools of the Palaeolithic and Mesolithic eras, Neolithic axes underwent a laborious, multi-stage manufacturing process:

Large, smooth grooves or depressions can still be seen on granite boulders at many Telangana sites (such as Polakonda and Kadambapur), marking the exact spots where ancient toolmakers ground their axes using sand and water as abrasives. This polishing process created a durable, impact-resistant edge capable of chopping down hardwood trees without fracturing the tool.

Alongside axes, the tool kit included:

Chisels and Adzes: Used for fine woodworking, boat building, and shaping wooden posts for huts.
Saddle Querns and Mullers: Large, concave granite slabs paired with cylindrical grinding stones, used daily to crush grains, wild seeds, and herbal medicines into flour and pastes.

Ring Stones: Heavy, perforated circular stones used either as weights for wooden digging sticks to plant seeds, or as mace-heads for defensive weapons.

The Micro-Blade Industry: Though they possessed large ground stone tools, Telangana's Neolithic farmers maintained a highly active siliceous blade industry. Using cylindrical cores of chert,

chalcedony, agate, and jasper, they produced thousands of small, parallel-sided micro-blades. These blades were routinely hafted into bone or wooden slots using natural resins to create composite tools like sickles, which were essential for harvesting early cereal crops.

The Evolution of Neolithic Pottery

Pottery was a critical innovation for early farmers, driven by the practical need to protect harvested grains from moisture, rodents, and insects, as well as the need for fireproof vessels to boil grains and legumes. The ceramic record of Telangana's Neolithic sites is divided into two primary evolutionary phases:

Phase I: Early Neolithic Ceramics (Hand-made Profiles)

The earliest pottery is entirely hand-made (constructed using the coiling or slab-building technique, without a potter's wheel). It is dominated by a coarse, dull grey ware and pale red ware. The clay was frequently mixed with coarse sand, mica flakes, or chopped grass (temper) to prevent the vessels from cracking during open-pit firing. Forms were simple, consisting of globular jars, wide-mouthed bowls, and shallow lids.

Phase II: Advanced Neolithic Ceramics (Wheel-Turned & Slipped)

As the culture matured, the introduction of the slow-turning turntable or potter’s wheel led to more uniform, thin-walled vessels. This phase introduces Burnished Grey Ware and Red Slipped Ware, often decorated with post-firing ochre painted lines around the neck and rims. Specialized forms emerged, including spouted vessels, perforated bowls (possibly used for steaming food or straining curds), and large, thick-walled storage jars embedded directly into the floors of mud houses.

The Ash Mound Tradition: A Unique Deccan Phenomenon

No study of the Neolithic period in the Deccan or Telangana specifically, is complete without analyzing the enigmatic Ash Mounds. These massive, stratified accumulations of vitrified cattle dung ash are unique to the Southern Neolithic complex of India and offer profound insights into the economic and ideological world of the region's early pastoralists.

The Nature and Composition of Ash Mounds

Ash mounds vary in size from small hillocks to monumental structures over 30 feet high and 100 feet in diameter. Early colonial observers initially mistook them for volcanic ash or industrial slag. Modern geoarchaeological analysis, pioneered by scholars like Raymond Allchin and verified at sites across the Deccan, proved that these mounds consist almost entirely of burnt, vitrified cattle dung.

The burning was not an accidental fire; it occurred at extremely high temperatures (often exceeding 800°C to 1000°C), which caused the silica within the dung to melt and fuse into a hard, porous, glass-like slag.

Functional and Ritual Hypotheses

Archaeologists have proposed two complementary interpretations for the formation of these mounds:
Seasonal/Ritual Bonfires: The accumulation of dung within central cattle pens reached unmanageable levels over several seasons. During major community transitions, such as seasonal migrations (transhumance) or winter solstice festivals, these pens were intentionally set ablaze. These massive bonfires served as central socio-religious rituals, celebrating the community's primary wealth: their livestock.

Sanitation and Stockades: The burning served a practical purpose by cleansing the livestock enclosures of parasites, ticks, and flies before the arrival of the monsoon rains. Over centuries of repetitive accumulation and burning on the exact same spot, massive layered mounds formed.

Ash Mound Footprints in Telangana

While the densest concentration of ash mounds lies in the adjacent Raichur and Bellary regions of Karnataka and Andhra Pradesh, Telangana holds several critical examples along its southwestern borders. Sites in the Narayanpet and Mahabubnagar districts show clear evidence of these pastoral monuments, usually situated at the bases of granitic hills, confirming that Telangana's early Neolithic economy was deeply tied to large-scale cattle pastoralism.

Subsistence Economy and Settlement Patterns

The Neolithic sites of Telangana reveal a sophisticated agro-pastoral economy tailored perfectly to the seasonal monsoonal cycles of the semi-arid Deccan Plateau.

Animal Domestication: The Core of Wealth

Faunal remains recovered from excavations indicate that animal husbandry was the dominant economic activity:

Zebu Cattle (Bos indicus): The humped cattle of South India were the undisputed foundation of Neolithic life. They provided milk, meat, hides, and dung, and were eventually used as draft animals for early agriculture. Their central importance is widely reflected in contemporary rock art.

Sheep and Goats (Ovis/Capra): Kept in large numbers, these animals acted as an insurance policy against crop failures, providing meat and milk in rugged terrains where cattle could not easily graze.
Domestic Dog (Canis familiaris): Skeletal remains found near house entrances indicate dogs were kept to guard homes and assist in hunting wild game.

Cultivation and Archaeobotanical Records

Flotation techniques applied to the soil samples of excavated Telangana sites have yielded a clear picture of early farming:
Kulkani Millet and Ragi (Finger Millet): These hardy, drought-resistant small millets were the earliest domesticated crops in the region, suited well for the erratic rainfall of the central plateau.

Horse Gram (Kollu) and Green Gram: These legumes were cultivated alongside millets, providing essential proteins to the human diet while naturally restoring nitrogen to the cultivated soils.

Exploitation of Wild Flora: Farming was supplemented by gathering wild fruits like ber (Ziziphus), wild date palm, and various edible tubers.

Architecture and Village Life

Excavations at sites like Polakonda and Hulikal provide a vivid picture of a Neolithic village in Telangana. The settlements were small, typically housing between 50 and 200 individuals:
Hut Construction: Houses were predominantly circular or oval mud huts, ranging from 3 to 5 meters in diameter.

Structural Elements: A circle of stout wooden posts was sunk directly into holes cut into the hard murrum or granite surface. The walls were made of wattle-and-daub (a woven lattice of wooden strips plastered with thick river clay mixed with cow dung). The roofs were conical and thatched with wild grasses or palm leaves.

Internal Features: The interior of these huts featured rammed earth floors, small clay hearths with two or three stones to support cooking pots, and flat granite querns embedded permanently into the floor for grinding grain. Outside the huts, researchers have identified small, stone-lined pits used as garbage dumps (refuse pits) or storage silos.

Major Neolithic Sites of Telangana: A Regional Inventory

The Neolithic map of Telangana spans multiple districts, with clusters concentrated near granitic outcrops and along the tributaries of the Krishna and Godavari rivers.

Polakonda (Warangal District)

Polakonda is one of the benchmarks excavated Neolithic sites in Telangana. Situated at the base of a massive granite hill, the site revealed a clear, uninterrupted cultural transition from the Mesolithic to the Neolithic period, followed by the Iron Age:

Key Discoveries: Excavations uncovered distinctive circular house floors, complete with post-holes, internal hearths, and fragments of Burnished Grey Ware.

Lithic Tooling: The site yielded an abundance of polished dolerite axes at various stages of manufacture, confirming it served as a primary regional tool factory.

Kadambapur (Karimnagar District)

Located near the mid-Godavari valley, Kadambapur provided vital evidence regarding the advanced phases of the Neolithic culture and its eventual transition into the Megalithic Iron Age. The site is noted for its rich ceramic assemblage, particularly its highly burnished wares and red-and-black pottery variations, alongside evidence of early copper usage in its uppermost Neolithic layers.

Pusalapadu and the Mahabubnagar Clusters

Situated in southern Telangana within the Krishna River basin, the fields around Pusalapadu have yielded extensive surface collections of ground stone celts, micro-blades, and animal bones. The presence of seasonal ash-stratification layers nearby connects this entire zone to the broader Deccan pastoral network.

Hulikal and Utnoor Margins

Positioned along the southwestern border of Telangana, this region links directly with the classic ash mound landscapes of the Raichur Doab. The sites here show dense concentrations of livestock enclosures, confirming that these early communities relied heavily on pastoral economies rather than intensive farming.

The Iconography of the Humped Bull

The undisputed star of Telangana's Neolithic rock art is the humped cattle (Bos indicus). Found at sites like Pandavula Gutta and various rock shelters across Mahabubnagar and Nalgonda, these cattle figures are painted predominantly in red ochre or white pigments:

Stylistic Trait: The animals are drawn with highly exaggerated, sweeping horns, humps, and powerful bodies.

Cultural Context: These drawings were not idle doodles; they represent the sanctification of the community's primary source of wealth and survival. The frequent depiction of cattle in rock art mirrors the real-world creation of the massive ash mounds, reinforcing a shared cultural focus on these animals.

Human Forms and Communal Expression

Alongside animals, Neolithic rock art features stylized, stick-like human figures:

Communal Dance Scenes: Figures are often shown holding hands in long rows, indicating the importance of group rituals, seasonal festivals, and community solidarity.

Hunting Depictions: Even as dedicated farmers, these communities continued to hunt wild game. Rock art panels frequently capture hunters armed with bows and arrows tracking deer, wild boars, and leopards, illustrating a dual reliance on both domestic herds and wild resources.

Mortuary Practices

The treatment of the dead during the Telangana Neolithic reveals deep family ties and early concepts of an afterlife. Unlike the grand, public stone monuments of the later Megalithic period, Neolithic burials were intimate and domestic:

Infant Urn Burials: Deceased infants were placed carefully inside large, grey-ware pots (urns) and buried directly beneath the rammed earth floors of the parents' huts. This practice suggests a desire to keep the lost child close to the family hearth.

Adult Inhumations: Adults were buried in extended positions in shallow graves dug within the village boundary, often accompanied by basic grave goods like a polished stone axe, a few micro-blades, and small pottery bowls containing food and water for their journey into the afterlife.

Preservation Challenges and Future Research Horizons

The Destruction of the Prehistoric Record

The Neolithic heritage of Telangana faces severe threats from modern economic development:

Granite Quarrying: Because Neolithic sites are located almost exclusively around granite hills, the massive expansion of commercial granite mining is destroying these ancient settlements. Entire hillsides containing tool factories, rock shelters, and ancient grinding grooves are being systematically blasted away.

Urban Expansion: As cities like Hyderabad, Warangal, and Karimnagar expand, outlying prehistoric sites are rapidly paved over for residential and industrial complexes.

Lack of Public Awareness: Unlike prominent historic temples, prehistoric mud villages and rock art panels are highly vulnerable to vandalism and neglect because they lack visible monumental architecture.

New Avenues for Research: To capture the full history of this crucial transitional era, future archaeological research in Telangana must adopt advanced scientific methods:

High-Resolution Residue Analysis: Conducting chemical analysis on the porous interiors of Neolithic pottery to identify lipid residues. This can conclusively verify whether these early communities were processing dairy products, boiling specific millets, or fermenting early beverages.

Stable Isotope Analysis on Faunal Remains: Analyzing teeth and bone fragments from excavated cattle to trace their dietary history. This method can reveal ancient grazing patterns and confirm whether early herders practiced transhumance (moving cattle up to the plateaus during the monsoons and down to the river valleys in the dry season).

Comprehensive GIS Digital Mapping: Building a centralized, digital geographic inventory of all surviving granitic tors and prehistoric sites across Telangana. This tool will allow researchers to predict where undiscovered sites might lie and help state authorities protect these irreplaceable landscapes before they are lost to modern quarrying.

Conclusion

The Neolithic sites of Telangana stand as the foundational footprint of modern civilization in the region. Over two thousand years, these early communities transformed the Deccan landscape—clearing forests, domesticating the humped bull, and turning wild hillsides into permanent villages. The polished stone axes, micro-blade sickles, and hand-made pots recovered from sites like Polakonda are not merely primitive artifacts; they are tools of an economic revolution that paved the way for all future societies. Protecting these ancient landscapes and studying their lessons is essential to understanding the deep roots of human ingenuity, resilience, and survival on the Indian subcontinent.

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