Clash of the Andean Titans: Wari and Tiwanaku at Cerro Baúl

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Between AD 600 and 1000, two great empires ruled the Andes—the Wari from mountainous central Peru, and the Tiwanaku from the windswept shores of Bolivials Lake Titicaca. In only one place has evidence for direct confrontation been discovered, the Moquegua Valley of southern Peru. Here, the Wari thrust forth their frontier and erected a citadel atop an imposing mesa, Cerro Baúl, where they held sway for 400 years. A mere five miles away, the Tiwanaku toiled in their fields and built grandiose temples of stone and adobe. Recent Field Museum research on this majestic peak has revealed startling insights into how the Wari and Tiwanaku interacted, and how their dynamic relationship ultimately contributed to the rise of the Inca Empire.

An anthropological rarity

Cerro Baúl is a unique mesa formation in southern Peru looming 600 meters above the valley floor. Today it is an apu, or sacred place, that serves as a pilgrims' destination for making offerings to the mountain spirit. In Wari times, a small city rested on its summit with palace complexes, temples and ritual feasting facilities for entertaining dignitaries. Despite the fact that the Wari and Tiwanaku apparently shared a 500-kilometer border between Moquegua and Cuzco, Cerro Baúl is the only place where evidence of direct interaction has been discovered thus far. It is clearly a unique combination of fortress, provincial capital, imperial embassy and sacred city. Since the overlap between ancient states that never conquered one another is rare, the Moquegua frontier is a unique place for studying the dynamics of imperial confrontation and ethnic diversity.

Similar faiths, different societies

Although the Wari and Tiwanaku shared similar iconography and religious practices, they were eco-

nomically and politically quite distinct. The Tiwanaku, virtuosos of stone masonry, built enormous temple mounds and palaces. They transformed the windswept *altiplano*, or high plain, into a network of groundwater-fed canals and raised field systems for altitude-tolerant crops such as potatoes, tubers and quinoa. Herding such animals as the native Andean llama and alpaca provided both meat and wool. However, in order to grow temperate crops, such as corn and coca, two important staples to Tiwanaku ritual life, they had to extend into the lower valleys toward the Amazon or the Pacific Ocean.

The Wari, on the other hand, centered their empire along the spine of the Andes. They perfected high-altitude irrigation terracing to turn the steep mountain slopes into productive farmland for corn, peppers, coca and other crops. Their capital was a thriving city of several square kilometers and tens of thousands of inhabitants. Throughout their realm, they erected large, quadrangular complexes of tall, straight-lined buildings that resembled barrack complexes with restricted access. From afar, these did not look like the temple pyramids of the Tiwanaku, but



were imposing urban intrusions on the landscape. Wari textiles and pottery show vibrant depictions of warriors, anthropomorphic beings and Viracocha, the principal deity. While the Tiwanaku invited worship through their colossal temples —featuring monuments carved with Viracocha and other supernatural beings—the Wari brought religion to the people through the mundane material objects of textiles and pottery.

The superpowers cease

These two vastly disparate civilizations met each other in the Moquegua sierra. Through our research at Cerro Baúl, we have been tracing their intertwined development and ultimate political demise sometime around 1000. Early interaction was limited. The Wari brought large numbers of settlers to colonize the region surrounding Cerro Baúl (ca. 600), while Tiwanaku settlement was limited to the lower reaches of the Moquegua river valley. This hostile standoff was not resolved by violent exchanges, at least as reflected on Tiwanaku skeletal remains, but rather through radical changes in Wari and Tiwanaku politics.

The Wari reconstructed their mountaintop city to incorporate offices for the state. Meanwhile, the Tiwanaku downstream built an immense temple complex at Omo, the only one of its kind outside the Tiwanaku altiplano heartland. Finally, many Wari colonists left their homes on the slopes of Cerro Baúl, and new communities made up of Tiwanaku settlers began to form around the Wari summit.

These new alliances between Tiwanaku settlers and Wari elites may have contributed to the

Donna Nash and Kirk Costion note the depths of the first excavation layer.

Tiwanaku's decline around 1000. Factions formed between the Tiwanaku peoples who lived under Wari rule and those who remained loyal to the downstream Tiwanaku state elites. The loss of labor resources and people leaving their political lordship may have destabilized the Tiwanaku status quo. Some scholars have argued that a severe drought that began around 1050 led to the Tiwanaku's collapse. If our reconstruction of the social splitting is accurate, the inherent vulnerability in the social system may have impeded an effective response to the drought.

Not long after 1000, both Tiwanaku and Wari had abandoned their Moquegua settlements, and reverberations spread throughout their realms. By 1100, the sister states had entirely collapsed. Smaller regional kingdoms ensued, building on the developments of the Wari and Tiwanaku. One of these eventually became the Inca Empire, the most powerful and extensive native state the Americas had ever seen.

Investigating these ancient Andean supremacies is giving us new insights into how communities integrate, how they cope with the power of the empire and how they ally themselves with competing polities to achieve local autonomy. In today's world, where national priorities and security reach beyond our traditional borders and force us to interact with other nations, often aggressively, it is imperative to examine these interactions their effects on people and communities. While government administrations come and go, it is the people who endure and ultimately judge the interpretation of history.

The Cerro Baúl Expedition has been sponsored by the G. A. Bruno Foundation, the Heinz Family Foundation, the National Science Foundation, the Asociación Contisuyo, the University of Florida and The Field Museum.

Visit www.fieldmuseum.org and for more information on Drs. Williams and Nash.

Classic Wari ritual drinking vessel from Cerro Baúl. The first is modeled as a human foot.





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Buried remains may be invisible on the ground surface, but using techniques related to x-ray imaging, archaeologists can "see" what's underneath to understand how ancient societies developed and flourished. In one instance, we used geophysical survey technologies at Cerro Baúl to map out remains of the ancient city. Since excavation is time consuming and expensive, we are limited in the amount of area we can expose. With ground-penetrating radar, we transmit a radar wave into the ground—about the same frequency as a television broadcast antenna—and measure its reflections off of buried objects. This way we can distinguish hidden archaeological features, such as ancient buildings, tombs or buried agricultural fields. The Field Museum's Laboratory for GIS & Remote Sensing now manages an array of techniques and equipment for this type of research.

Ryan Williams uses a gradiometer to sense differences in the Earth's magnetic field that represent buried archaeological features.

