that would promote natural burning. The patterns of vegetation change documented at Kumpawapi may, therefore, reflect the activities of prehistoric human populations rather than natural environmental change (Fig. 7). The possibility that those activities might include land clearance for some form of agriculture is less certain, and has become the subject of scholarly debate.

The possibility of humans disturbing forests in the Ban Chiang region beginning around 6,000 years ago is intriguing, since up to now there is no archaeological evidence of humans living there this long ago. Even the oldest estimate for the initial settlement of Ban Chiang of between five and six thousand years ago, an estimate which some would argue is far too generous, post-dates the evidence for forest disturbance by at least one thousand years! The evidence for significant forest disturbance through burning led me to formulate a hypothesis that human populations existed in northeast Thailand prior to the development of permanent, relatively complex domestic communities such as Ban Chiang. These earlier populations possibly practiced shifting cultivation and/or hunting and gathering in concert with an intensive use of fire as a tool for landscape manipulation. The lack of archaeological evidence for such communities may reflect that such evidence did not preserve, has been destroyed, or is simply yet to be found.

In any case, the information obtained from the lake sediments at Kumpawapi and related sites—natural archives of environmental data—is tantalizing and certainly worthy of more detailed investigation. It may be that with further research into past environmental change, particularly when coupled with future archaeological investigations, the missing evidence required to test the hypothesis I have proposed will emerge.

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Fig. 1. A goat perches steadfastly on the head of a bronze pin from Sapatikurge (206-215 C.E.) in southern Uzbekistan. The pin in the bronze came from either Afghanistan or Kazakhstan.

History Museum, Tashkent. H. 10 cm

Fig. 2. Uzbekistan.
Map by Anne Martin-Montgomery

On the Track of the Ancient Silk Road

by Fredrik T. Hiebert

Driving westward from Tashkent (the modern capital of the Republic of Uzbekistan) to the ancient city of Samarkand, way station on the so-called Silk Road, is an amazing experience for any archaeologist who has heard about the fabled route. Samarkand is located on thick bluffs of fine loess silt along the Zeravshan River, and appears suddenly from the surrounding valley and plains. As one approaches the city, turquoise blue domes shimmer through the haze of dust that hangs in the air. Samarkand is a fascinating mosaic of old and new—a living archaeological site, with a bustling food market located in the shadow of the famous 15th century blue-domed mosque of Bibi Khanum. The center of the city is comprised of a large complex of monumental buildings called the Registan, with three glazed-tile facades forming a courtyard of striking beauty (Figs. 3, 4). Samarkand was a center for law, religion, and the arts during the medieval Islamic period (12th-15th century AD) and is built upon the remains of a much older city, Afrasiab, whose remains form an extensive field of ruins nearby. Afrasiab is currently being excavated by a joint Franco-Uzbek team. Recent research has pushed the origins of the town back into the middle of the 1st millennium BC.

Through ancient and medieval times, the “Silk Road” was a major thoroughfare for trade and travel between China, the Middle East, and Europe, a channel for the flow of goods, people, and ideas. However, the term “Silk Road” coined in 1877 by the German geographer Ferdinand von Richthofen—is misleading, for there is no actual road. In Central Asia the route took the form of a series of oasis settlements separated by large stretches of desert and steppe. These central Asian settlements had an antiquity and...
Fig. 3. The intricately tiled facades of the Registan were erected in the 15th century by the great Uzbek ruler Ulugh-Beg. They enclose a courtyard at the heart of Samarkand, Uzbekistan, one of the central “staging” points on the famed Silk Road.

Fig. 4. A monumental decorative tile from a 15th century AD building in Samarkand. This and the other objects pictured here can be seen during the current exhibition of treasures from Uzbekistan at the Arthur Ross Gallery at the University of Pennsylvania. Art Museum, Tashkent. H. 65 cm

Fig. 5. The road south from Samarkand into southern Uzbekistan drops from the peaks of the Hissar mountains to the broad valley of the Amu Darya River. The mountain range is home to the wild goats frequently pictured on classical Bactrian objects like that shown in Figure 1.

Fig. 6 a-b. (a) Fred Hiebert (left) and Timur Shrinov excavate within a structure at the Bronze Age site of Sapalli tepe. The ridges that can be seen running across the center of the photo and elsewhere show where wall foundations lie beneath the surface. The patches of green indicate where the rooms of the complex were excavated in earlier field seasons—the soil that was disturbed holds the scant moisture better than the unexcavated walls. (b) Plan of Sapalli tepe.

Fig. 7. Made of steatite with slabaster inlay, this ritualistically stylized loomweight dates to the middle of the 3rd millennium BC. It is decorated with intertwined snakes in a style known across Mesopotamia, Iran, and Central Asia. It was found at the turn of the century in the Sochi Valley of Uzbekistan. History Museum, Tashkent. H. 36 cm

Fig. 8. An animal with a long neck bites its tail on a 9th century AD bowl from Afrasiab. Registan Museum, Samarkand. Diam. 25 cm
Southern Uzbekistan

To the south of Samarkand, the modern road leads through a small mountain pass and opens onto a large river valley overlooking the plain of the ancient Amu Darya. The Amu Darya is the Oxus River described by classical geographers and historians like Strabo, Ptolemy, and Herodotus. It flowed through the ancient country of Bactria, and in the broad alluvial plains of nearby small rivers are dozens of mound clusters of pre-Bronze Age culture. The region of southern Uzbekistan has been actively explored since the turn of the century, and large-scale excavations have revealed complex cities, recovered early traces of Buddhism, and documented the development of the pre-Bactrian kingdom and that of the subsequent Kushan dynasty. In the early 1970s Soviet archaeologists located much earlier Bronze Age remains in the region. These "Bronze Age Bactrian" sites, dating to around 2000 BC, had unique architecture and did not compare to anything else that had been excavated in the greater Near East. They were extremely well planned but could hardly be called "urban." They appeared to be individual fortified building complexes.

These Bronze Age sites have a distinctive set of ceramics and small finds comparable in technological expertise and style with finds from other Bronze Age cultures of Iran, South Asia, and the Near East. But the closest parallels can be found only in Turkmenistan, separated from southern Uzbekistan by some 300 miles of desert. There the Soviet archaeologists Viktor Sarianidi and Emil Masimov documented a series of Bronze Age sites characterized by surprisingly similar fortified architecture, ceramics, and artifacts. The sites found in the delta of the Murgab River of Turkmenistan were the predecessors of the classical Silk Road sites in the region, as were the early sites of southern Uzbekistan.

Collaborative Research

Our collaborative research in Uzbekistan began in 1994, after Uzbekistan gained its independence. The initial field team consisted of myself, Timur Shirinov, director of the Institute of Archaeology in Samarkand, and Dr. Valeri Gulaev, assistant director of the Institute of Archaeology in Moscow. Leaving Samarkand, we drove south into the foothills and passes of the Hisar mountain range (Fig. 5). There we saw wild tulips and wild goats like those often depicted in the iconography of the ancient Bactrian world (Fig. 1). South of the mountains we followed the small rivers which approach but do not join the Amu Darya, instead forming vast delta-like fans bordering the desert. The first sites that we investigated were Sappali tepe and Djarkutan tepe (Fig. 6). Both are unique building complexes of the Bronze Age where the architecture and ceramics had already been revealed through widespread excavations. Over subsequent weeks we worked with several enthusiastic colleagues from the Uzbek Institute of Archaeology, creating a true collaborative study of an early Asian civilization.

The results of our research, based on the collection and study of faunal and botanical materials, and analysis of a new set of radiocarbon dates, indicate that the distinctive oasis civilization of southern Uzbekistan employed large-scale irrigation agriculture as early as 2200 BC, and was comparable in social complexity with the neighboring great civilizations in the Indus Valley, Iran, and Mesopotamia. We have subsequently been able to sample sites in the region that show that these oases are in many ways the cultural and economic predecessors of the classical cities which later came to be major trade centers on the Silk Road.

Treasures of Uzbekistan: The Great Silk Road

An exhibition of objects from Uzbekistan has opened at the Arthur Ross Gallery at the University of Pennsylvania (see box). The opportunity to exhibit these treasures is a direct result of the excellent relations generated by our international collaborative effort. The pieces illustrate the richness and variety of the ancient cultures of Uzbekistan from the Bronze Age through the 19th century AD.

Recommended Reading


FREDRIK T. HIEBERT, the Robert Dyson Assistant Professor and Assistant Curator of the Near East Section at the UPM, investigates the Bronze Age civilizations and trade routes of the deserts of Central Asia and the related ancient ports and shipwrecks of the Black Sea. For this research, he was presented with the Chairman's Award from National Geographic Committee on Research in 1998, and an honorary commendation from the Uzbekistan Ministry of Culture in July 1999.