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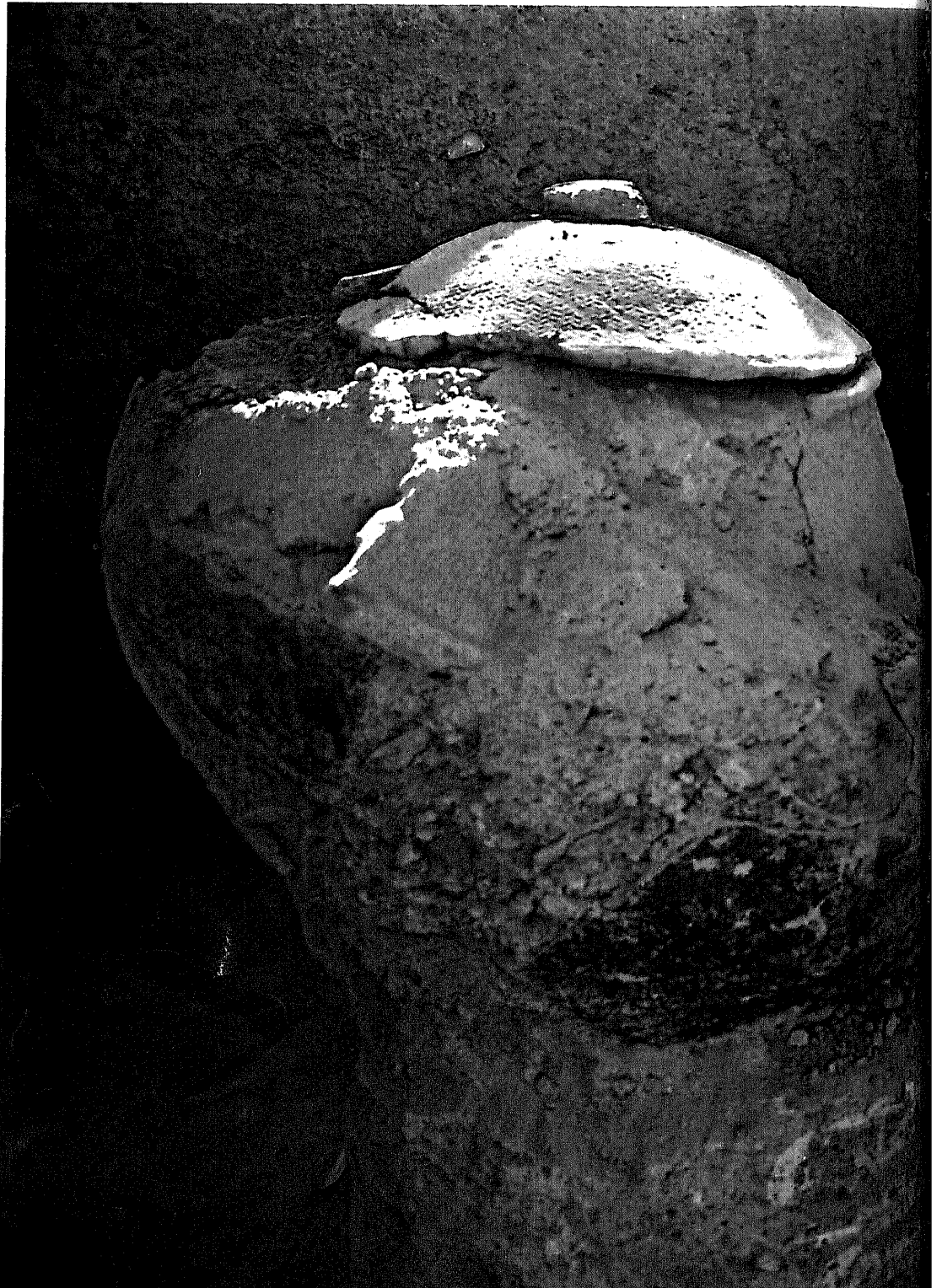
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Finding West Africa's

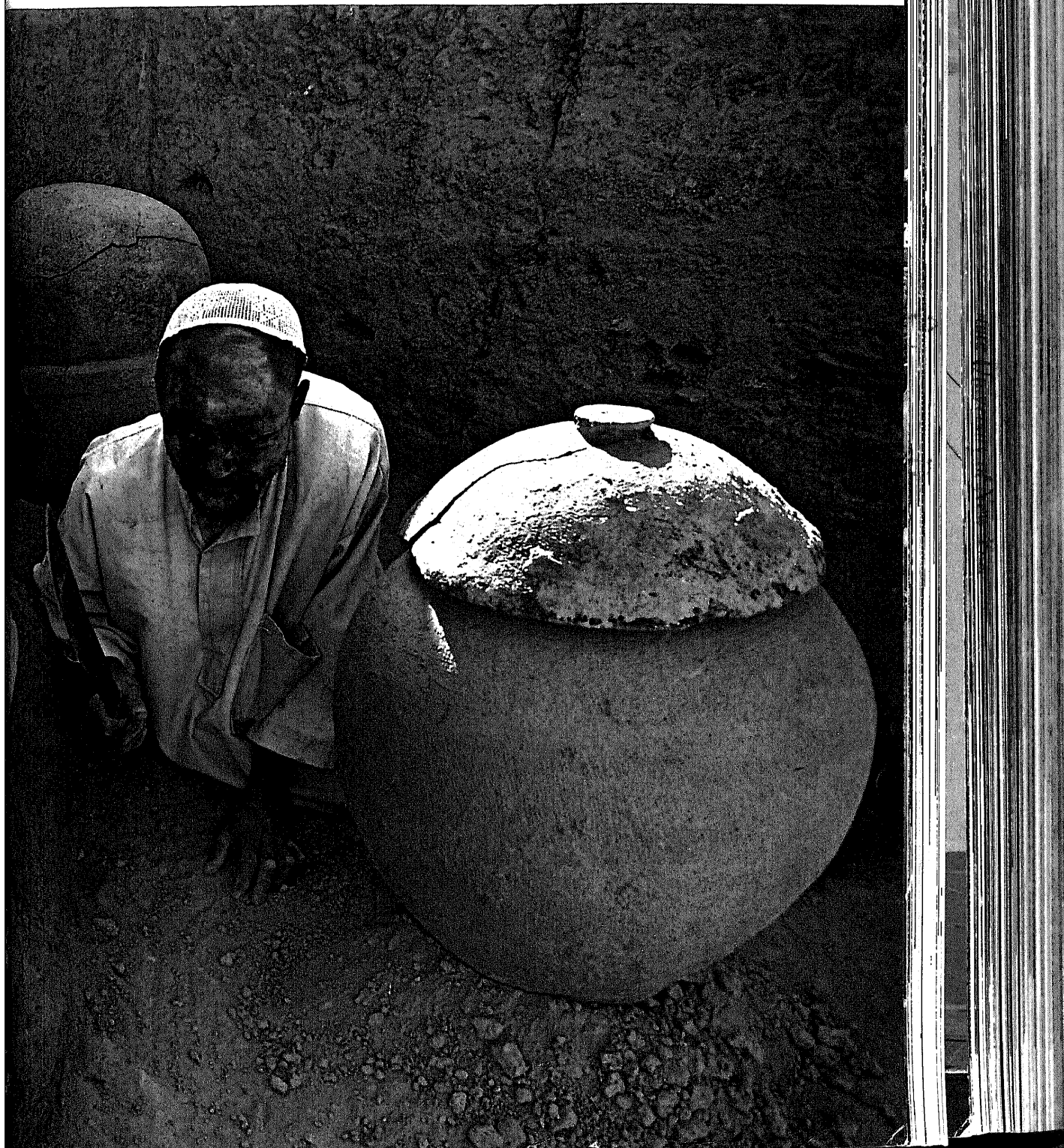
By SUSAN and RODERICK McINTOSH Photographs by



Oldest City

MICHAEL and AUBINE KIRTLEY

*Bones of the past lie in
funerary urns unearthed at
Mali's Jenne-jeno, a city
recently revealed as a
capital of commerce in
West Africa more than a
thousand years ago.*



TWO CITIES lie as neighbors on a stark river plain of West Africa. One stirs with the vigor of 10,000 inhabitants. The other, now lifeless, a thousand years ago held as many people, perhaps more.

Three kilometers separate modern Jenne, busy with marketing and trade, from the ghost town Jenne-jeno—"ancient Jenne." Both sprawl across flats where the Bani and Niger Rivers weave braided courses in the Inland Delta region of the Republic of Mali (map, page 400).

In the scorched bleakness of the Sahel belt of West Africa, Jenne-jeno is a great wonder—and a paradox. From a start in the third century B.C., the city by A.D. 800 had grown to support many thousands. Mysteriously abandoned 600 years ago, Jenne-jeno lay forgotten for centuries.

Today a few acacia trees and a clump or two of mangoes dot the barren ancient site, a vast teardrop-shaped mound that rises to a height of seven meters (23 feet)—beyond reach of annual floods—and measures two kilometers (1.2 miles) around its perimeter. Composed entirely of the debris of human occupation, this tell is a maze of eroded house walls, the surface littered with potsherds, glass beads, fragments of stone bracelets, and bits of corroded metal.

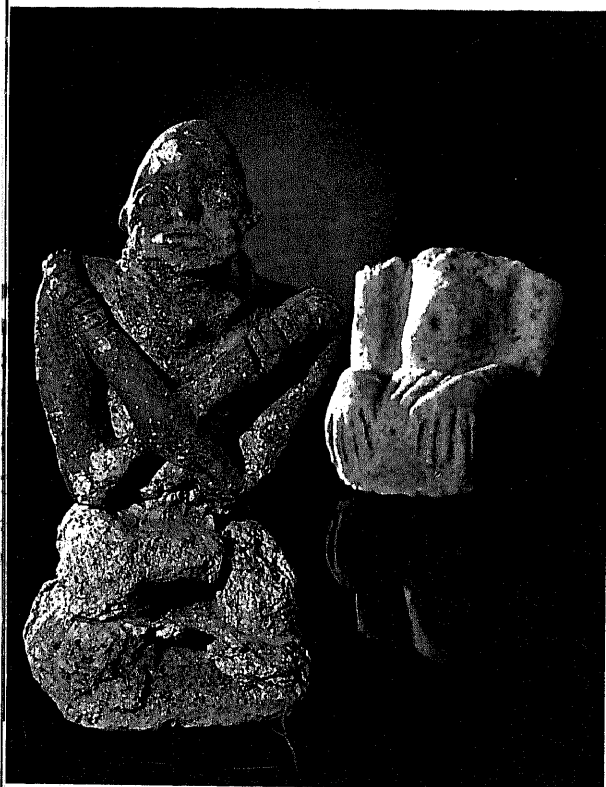
During two field seasons, in 1977 and 1981, my husband and I probed at the skeleton of Jenne-jeno. Its old bones, in the outcome, yielded evidence that here 10,000 or more inhabitants fashioned an advanced society vibrant with elegant craftsmanship, productive agriculture, and far-reaching trade. It is the oldest known city, and perhaps the most important Iron Age site, in Africa south of the Sahara.

We came upon Jenne-jeno almost accidentally. In 1975 Rod and I, then graduate students in archaeology, had driven across West Africa from Senegal to Ghana to check out locations for future research. After days of travel over Mali's dry savannas, we entered a floodplain alive with cattle,

carpeted with grasses, and studded with man-made earth mounds that ignited our curiosity.

We stopped in the busy city of Jenne, intending to explore nearby sites the next day. Unfortunately, Rod was struck by virulent bacillary dysentery. We fled Jenne seeking a doctor, unaware that we had passed almost within sight of Jenne-jeno.

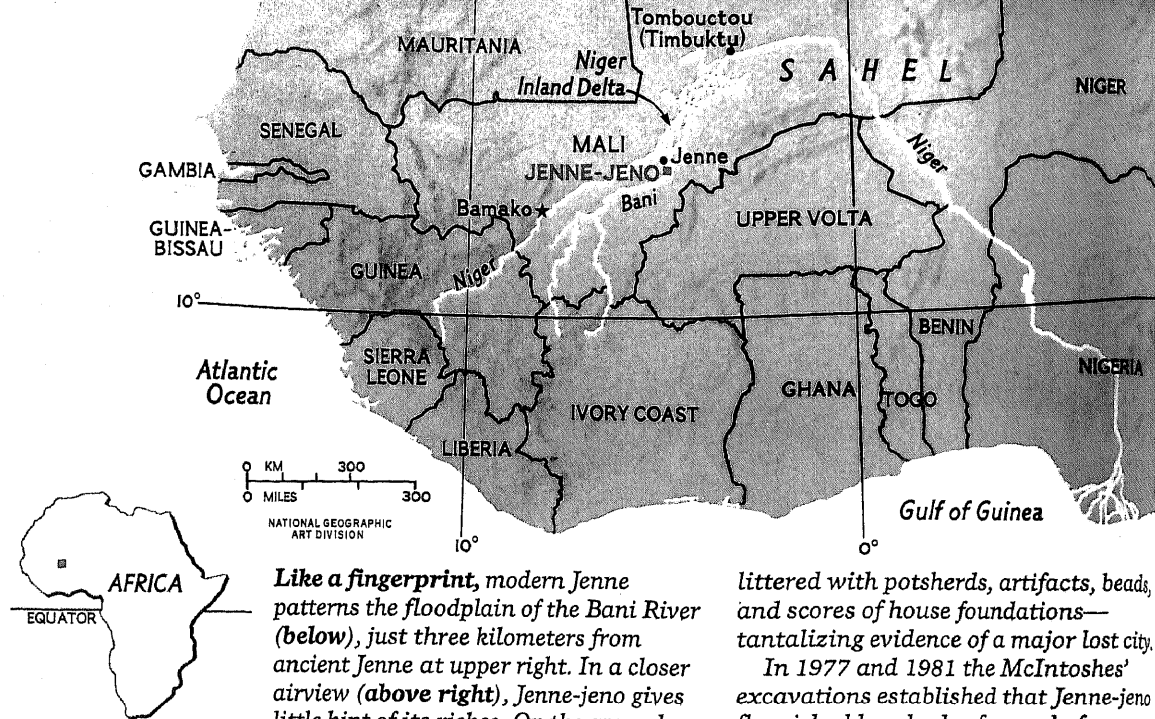
Our actual "discovery" of Jenne-jeno came months later as we pored over aerial photographs bought from the Mali government. A huge tell three kilometers southeast of Jenne, in area almost as large as the modern



ALL ARTIFACTS PHOTOGRAPHED COURTESY OF THE NATIONAL MUSEUM OF MALI AND THE INSTITUTE OF HUMAN SCIENCES

Kneeling statuettes (above) may have represented protective ancestral spirits for the inhabitants of Jenne-jeno—"ancient Jenne." Reverence for forebears persisted as late as 1900 in modern Jenne (right), where workmen clean pottery sherds near its impressive mosque.

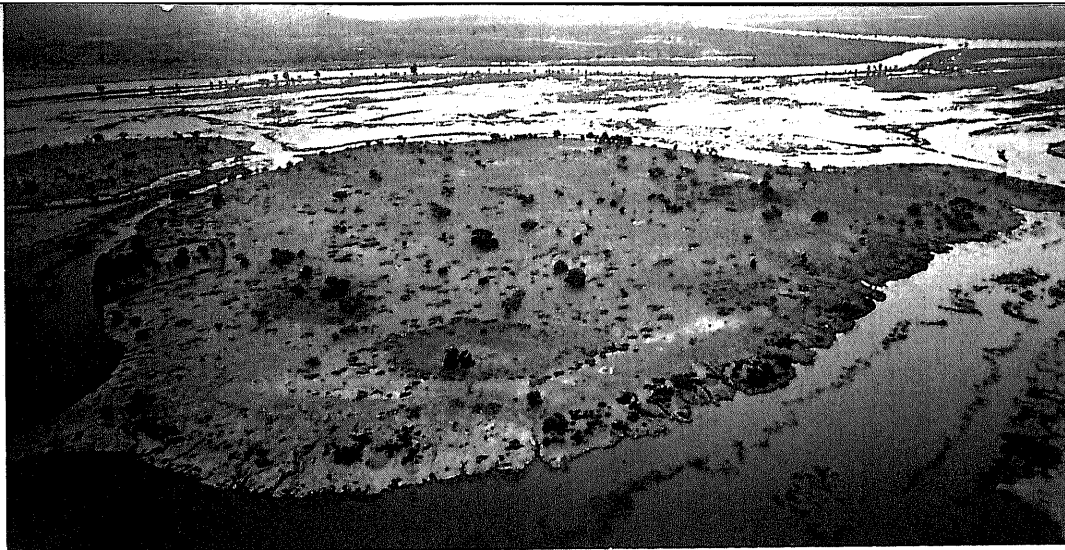




Like a fingerprint, modern Jenne patterns the floodplain of the Bani River (below), just three kilometers from ancient Jenne at upper right. In a closer airview (above right), Jenne-jeno gives little hint of its riches. On the ground, however, the authors found its surface

littered with potsherds, artifacts, beads, and scores of house foundations—tantalizing evidence of a major lost city. In 1977 and 1981 the McIntoshes' excavations established that Jenne-jeno flourished hundreds of years before cities were thought to exist in West





Africa. From a small group of round mud huts around 250 B.C., Jenne-jeno grew into a cosmopolitan center of perhaps 10,000 people by A.D. 800. Sited in the Niger's Inland Delta (above left), the city profited from an extensive riverine trade that linked it first with

the Timbuktu region and later, by caravan, with North Africa.

Ancient Jenne was mysteriously abandoned about A.D. 1400, perhaps because the Islamic elite considered the city contaminated by pagan practices. As ancient Jenne declined, modern Jenne arose.

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town, riveted our attention. We counted 65 smaller mounds in a four-kilometer radius.

Rod and I succumbed to the challenge of Jenne-jeno, and on January 30, 1977, we walked for the first time across the site. Flanked by friends from the Ministry of Culture of Mali, we gazed awestruck at what we saw. The dense brown clay was strewn with artifacts. We counted scores of mud-brick house foundations and spotted the truncated remains of a massive city wall. Clearly, thousands of people once lived here, but how long ago?

"It's a bewildering site, and we're starting from scratch," Rod said to me and our crew of local helpers. "We've got four months before the rains to learn as much as we can."

Our luck far exceeded expectations. Each of the four pits we dug yielded abundant evidence of how the inhabitants had lived and of the chronology of the community. Animal bones, rice chaff, and carbonized grains documented a mixed diet. Pottery fragments, spindle whorls, terra-cotta statuary, and crucibles for smelting copper or gold gave insight into local arts and crafts. Walls defined sturdy homes; hearths located cooking areas.

But most important of all was the radiocarbon dating from hearth charcoal proving that Jenne-jeno already had been occupied for 1,600 years when, about 1400, it was finally abandoned—not much after the time most scholars believe Jenne was founded.

Our discovery excited archaeologists and historians. It contradicted earlier assumptions that urbanism was introduced into West Africa only after North African Arabs penetrated the Sahara in the ninth century to control long-distance trade. Catalyzed by expanded trade, cities grew, first in the southern Sahara, centuries later farther south. By this reasoning, Jenne-jeno should have developed in the 13th century.

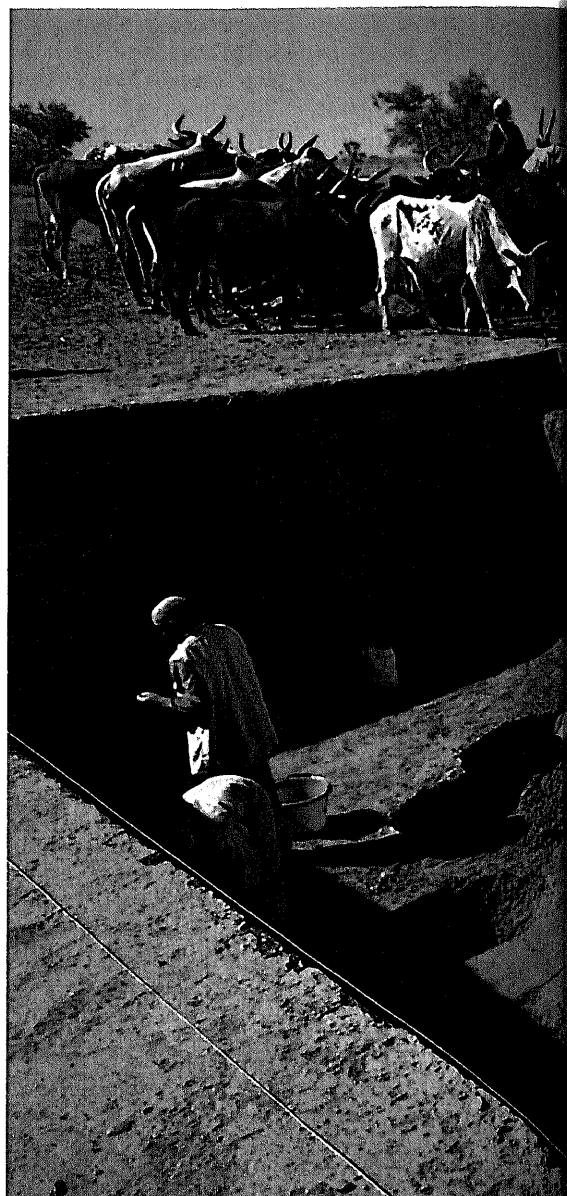
What then were *(Continued on page 408)*

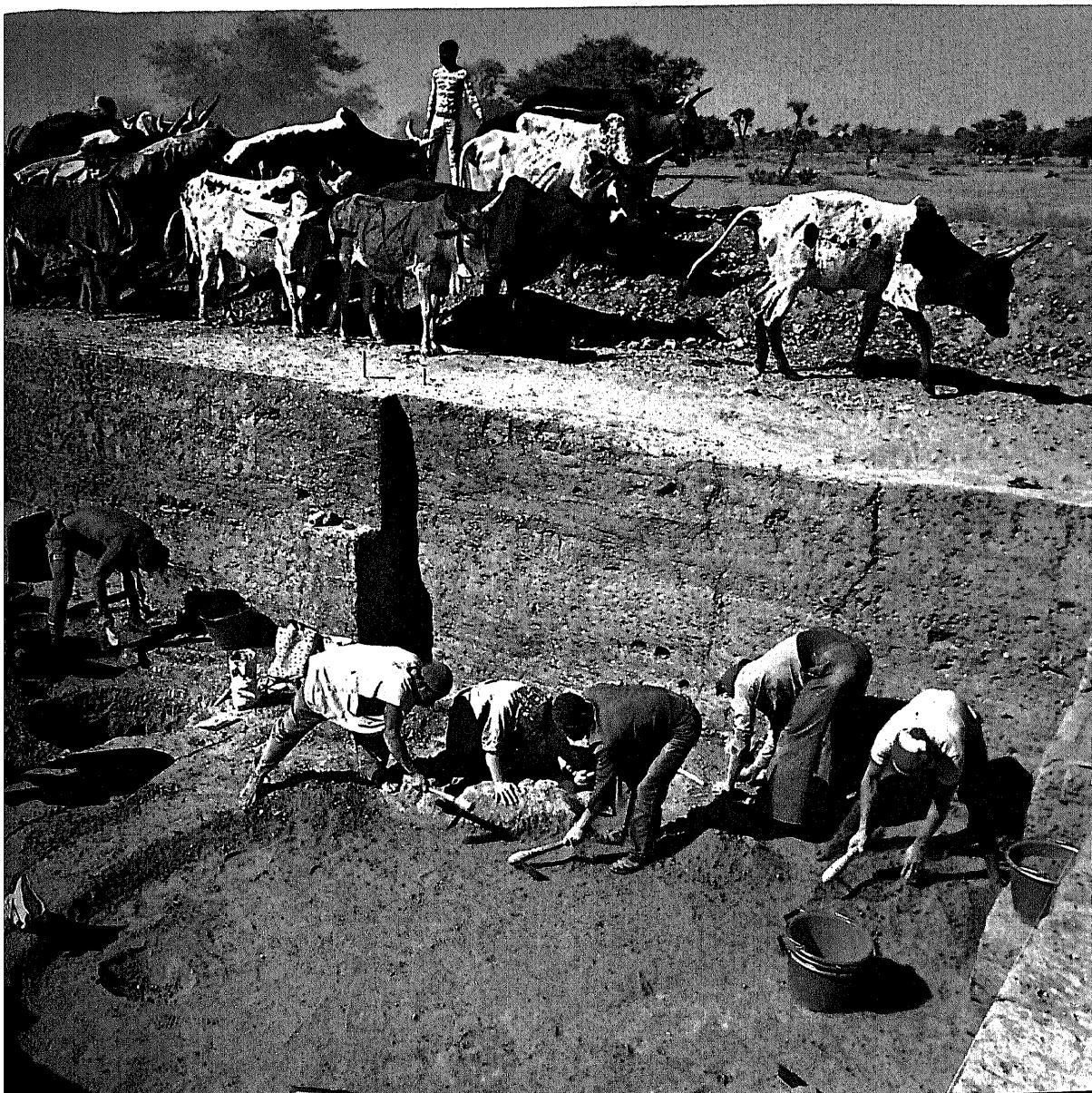
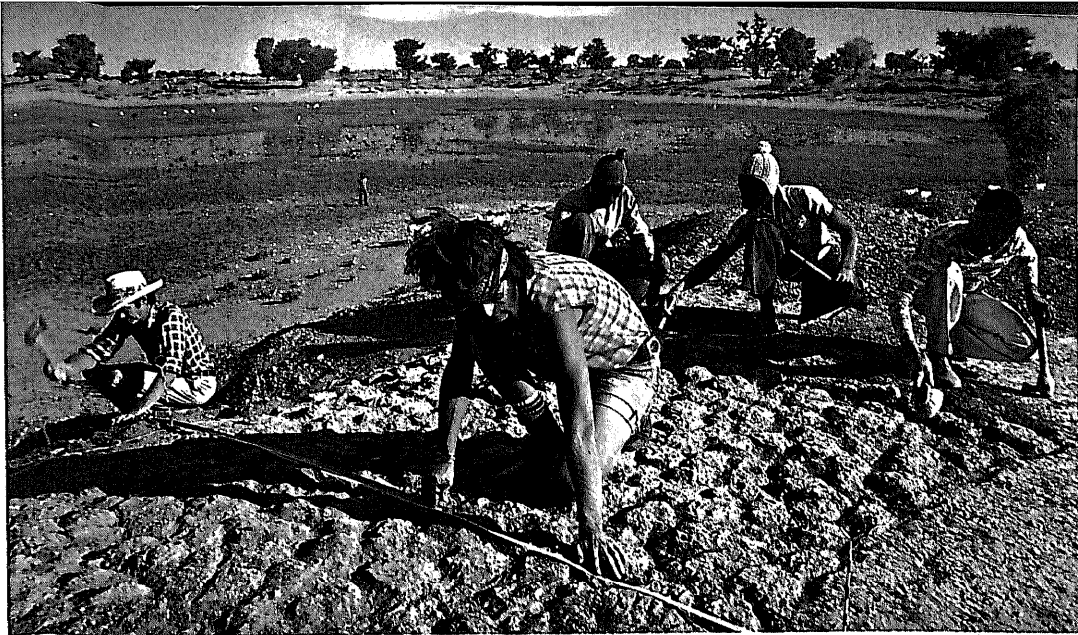
Susan Keech McIntosh and Roderick J. McIntosh, professors of anthropology at Rice University in Texas with 18 seasons of combined field experience, have directed the Jenne-jeno excavations since 1977. Michael and Aubine Kirtley are free-lance photojournalists based in Paris (see *On Assignment*, July 1982). This is their third assignment for the GEOGRAPHIC.

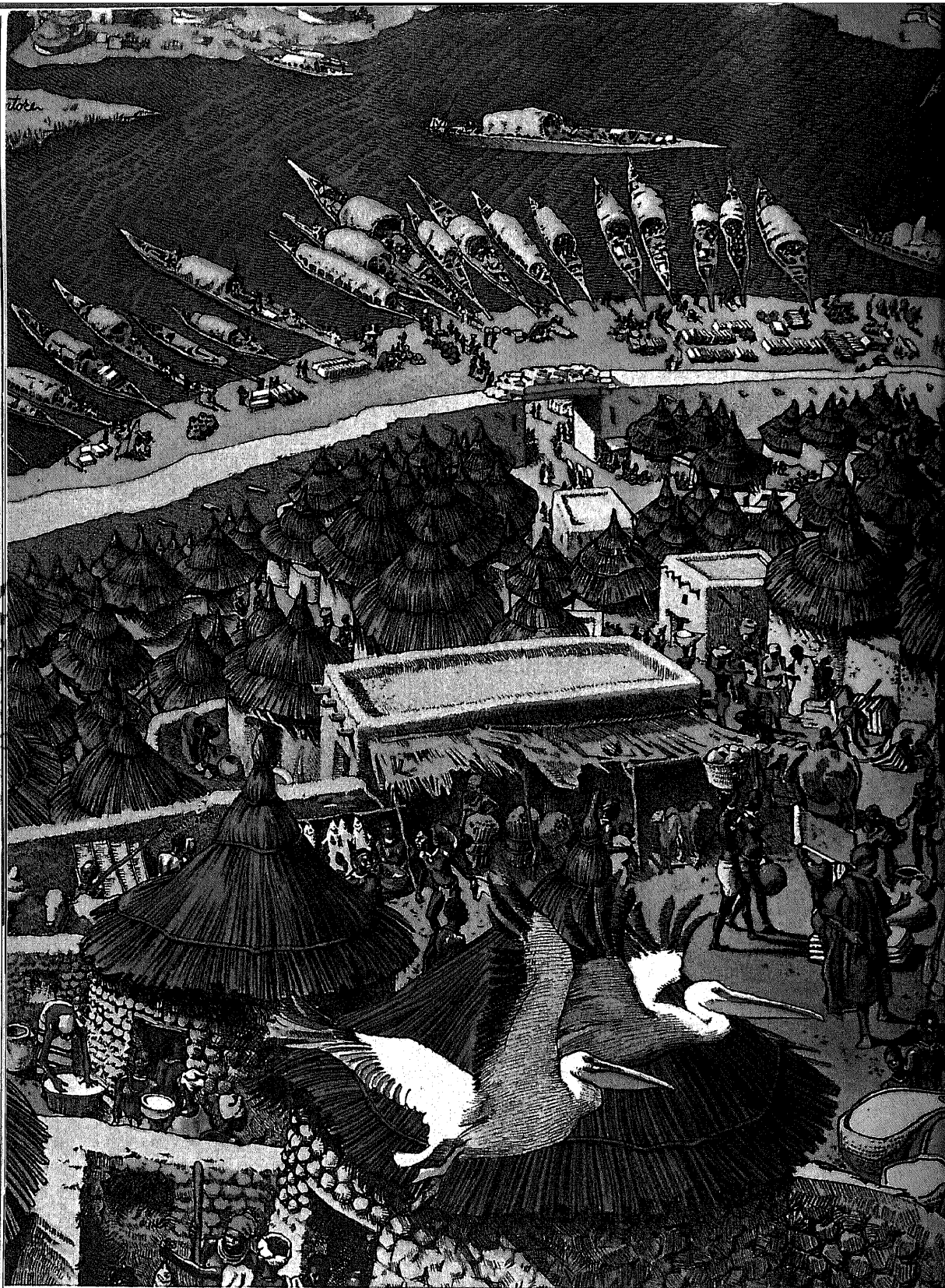
Eroded mud bricks are all that remain of a wall that girded the city (**right**). Rod McIntosh, at left, and assistant Karol Stoker measure its width at three meters and estimate its height at four meters or more.

What was its purpose? "Perhaps for defense," say the McIntoshes, "or perhaps for flood protection." Pottery found in and below the wall dates its construction from A.D. 400 to 800.

As errant cattle are herded from the dig (**below**), workers remove soil bit by bit to reveal the circular foundation of a mud-brick and thatch house. The diggers went down five and a half meters—16 centuries of occupation—before encountering sterile ground.

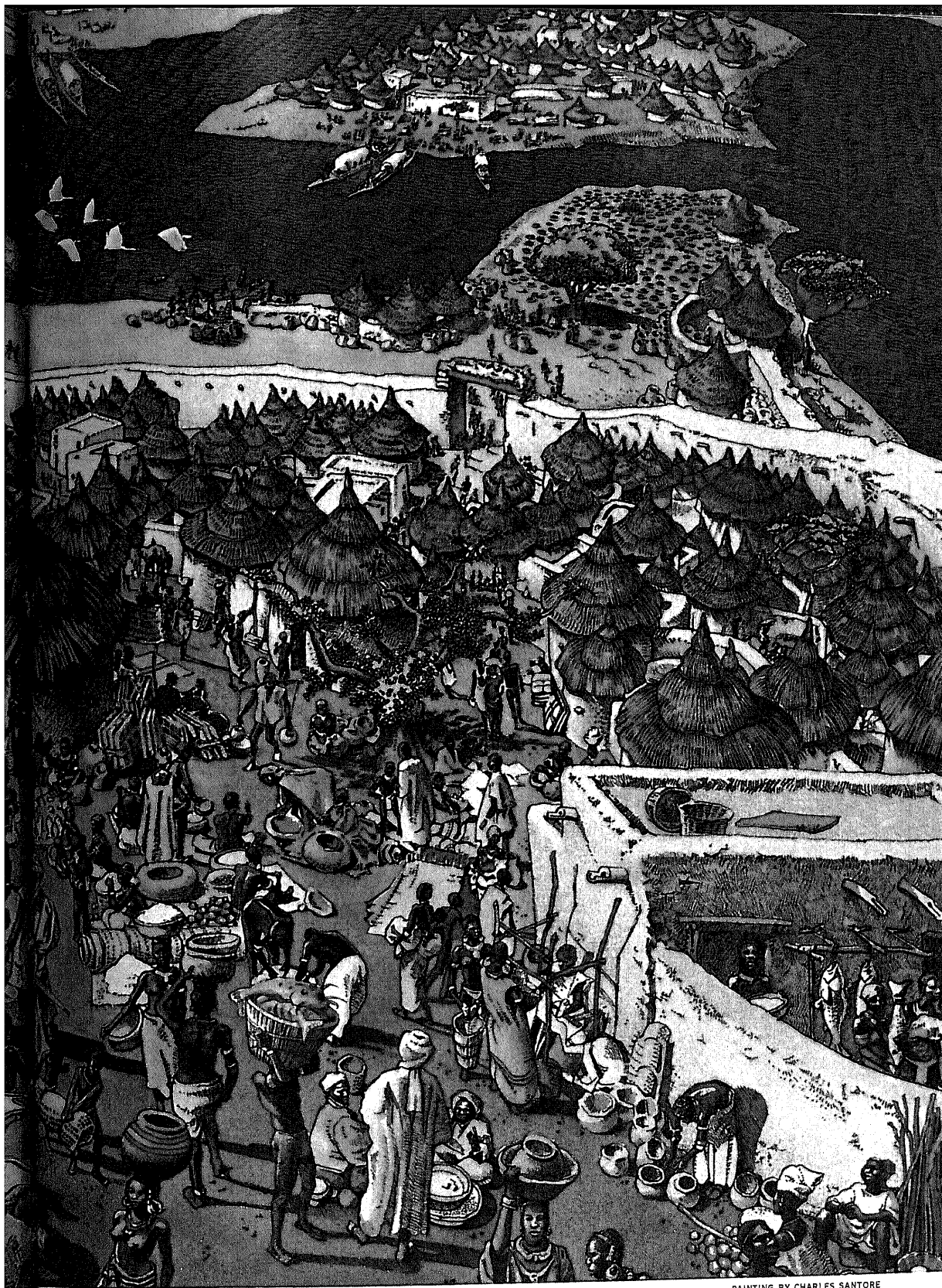






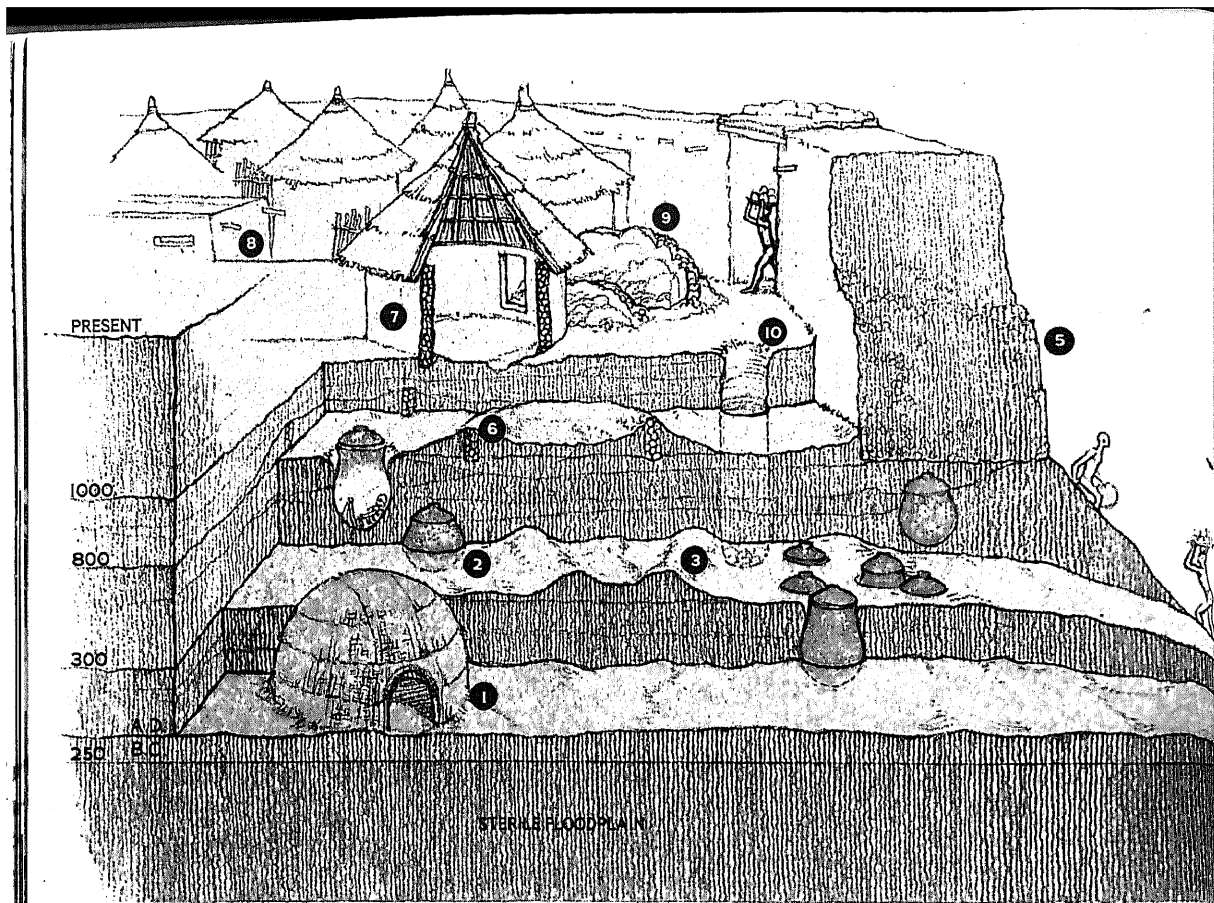
The hum of life echoes from Jenne-jeno's markets circa A.D. 1000, as inhabitants gather to barter rice and millet, baskets and pottery, and fish. By this time ancient Jenne and its satellite communities had penetrated the marketplace of

National Geographic, September 1982



PAINTING BY CHARLES SANTORE

North Africa. As goods, produce, and gold flowed north from Jenne-jeno via river and caravan, Saharan salt and Mediterranean glass beads came south, probably along with new ideas in architecture such as rectangular houses.

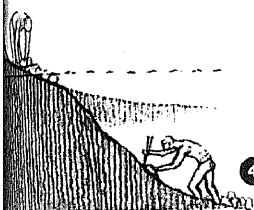


DEPTH NOT TO SCALE PAINTINGS BY WILLIAM H. BOND



The city that grew on top of itself

STAIRCASE into the past reaches to the earliest time of human occupation at Jenne-jeno (left). Artifacts found by the authors (right) chronicle the city's rise as a center of trade and commerce in West Africa.



The first inhabitants of ancient Jenne, perhaps herders and fishermen from the north, lived in circular houses (1) built of bent poles and woven reed mats waterproofed with mud.

From 250 B.C. to A.D. 300 (panel at right), the inhabitants used everyday bowls of a design common several centuries earlier in the southern Sahara, indicating that the original population may have migrated from there. The inhabitants wore necklaces of stone beads and employed sandstone cylinders for grinding grain. Children's clay toys of domestic and wild animals—this one is a bull—were made in great numbers.

The second phase of occupation, from A.D. 300 to 800, shows the use of urns for burial (2) and the eroded foundation of a house (3). For building material residents employed mud from the floodplain (4), carried to the site and stacked layer upon layer. Thus the city literally grew on top of itself—to a depth of 5.5

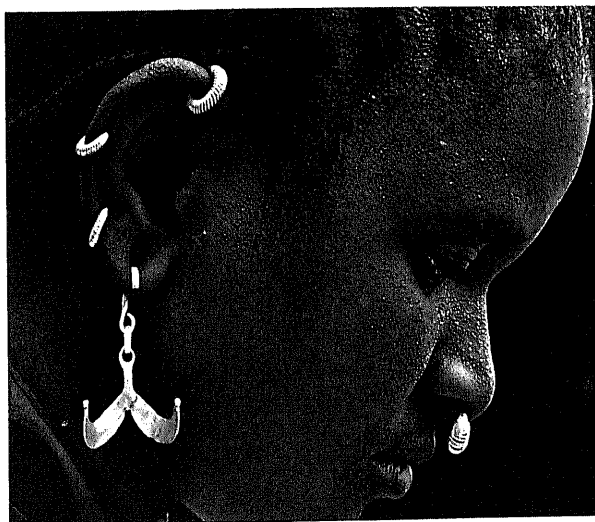
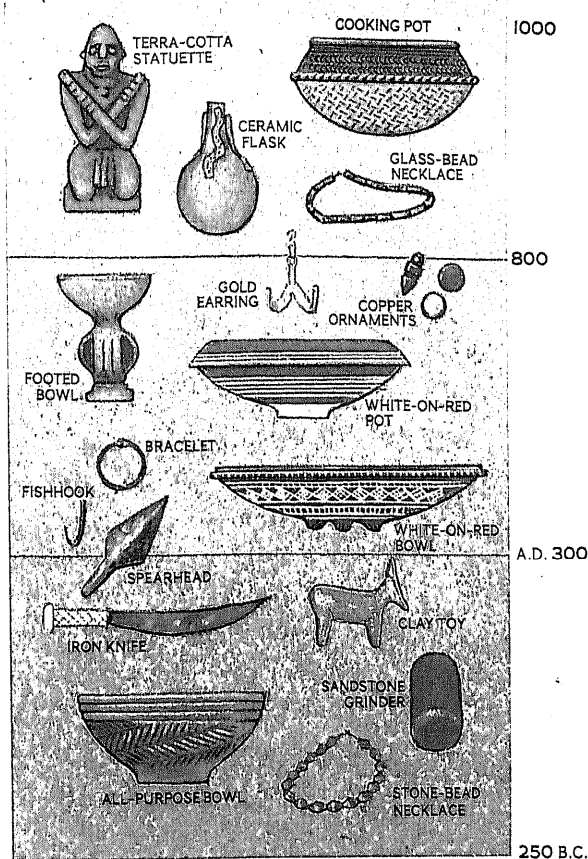
meters over 16 centuries. By 800 the wall (5) that girded the city was complete.

In addition to iron fishhooks and bracelets (panel), pots and bowls painted with white designs appear during this phase. Because the paint washes off readily, the authors conclude that the pottery served only decorative purposes. This use of luxury ware indicates a level of affluence and sophistication based on success of the city's trade system. A footed bowl is similar to others found as many as 750 kilometers upstream along the Niger. Saharan sources likely supplied the copper for hair ornaments. City goldsmiths fashioned an earring—the oldest yet found in West Africa—probably from gold mined far to the south.

From 800 onward, mud bricks, uncovered in foundations (6), were employed in house construction. Terra-cotta statuettes (panel) and ceramic flasks may have had a ritual purpose. Glass beads for a necklace came from North Africa. The top of a cooking pot is decorated by fingernail indentations in the wet clay, the bottom by impressing braided twine.

Jenne-jeno reached its heyday—defined by city size, diversity of artifacts, range of imported goods and luxury wares—between 700 and 1000, with round houses (7) and rectangular ones (8) seeming to vie with one another for space. When one house crumbled (9), another was built on top of it. Garbage pits (10) reached down to earlier levels of occupation.

After 1000, despite new commerce with North Africa, the city's fortunes began to wane, shown by a population decrease. Jenne-jeno was abandoned around 1400.

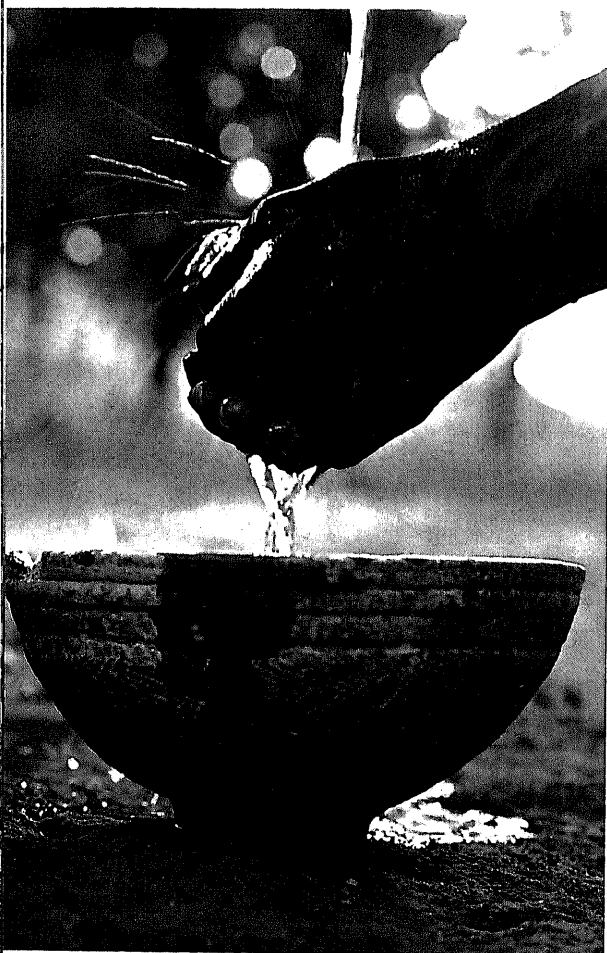


Ties of gold bind nomadic Fulani women with the women of ancient Jenne. Wearing a nose ornament and rings that rim her ear, a Fulani (above) models an earring found during the 1981 excavation (panel above). Two other Fulanis (facing page) wear modern gold earrings; the one at left adds silver coins and chunks of polished amber.

(Continued from page 402) we to make of our radiocarbon dates testifying that Jenne-jeno existed 1,500 years earlier?

The evidence suggested an impressive buildup of population in and around the ancient city throughout the first millennium. When and why did Jenne-jeno begin to grow? What occupied all those people? What was so attractive about the location that the city held in orbit so many satellite communities?

Only further excavation could provide



The bridge of time connects the pottery of ancient and modern Jenne. A bowl that dates from around 200 B.C. may have been used for washing (above). Similar bowls serve the same purpose in modern Jenne, where a potter (facing page) uses wooden stamps for decoration, a technique first popularized in Jenne-jeno eight centuries ago.

the answers. By 1980 we both were members of the anthropology faculty at Rice University in Houston, an institution with strong resources to back us. Then, too, our 1977 findings won interested attention from scholars in Europe, Africa, and the United States. As a result, for our second field season we gained additional support from the National Science Foundation and also benefited from cooperation and logistic backing by Mali's Institute of Human Sciences.

With three graduate students as assistants, we arrived at modern Jenne on New Year's Day 1981, exhausted from the dusty two-day road trip from the capital, Bamako, which we had reached by air. Dozens of children surrounded the taxi, demanding candy, ball-point pens, and Malian ten-franc coins (worth about two U. S. cents).

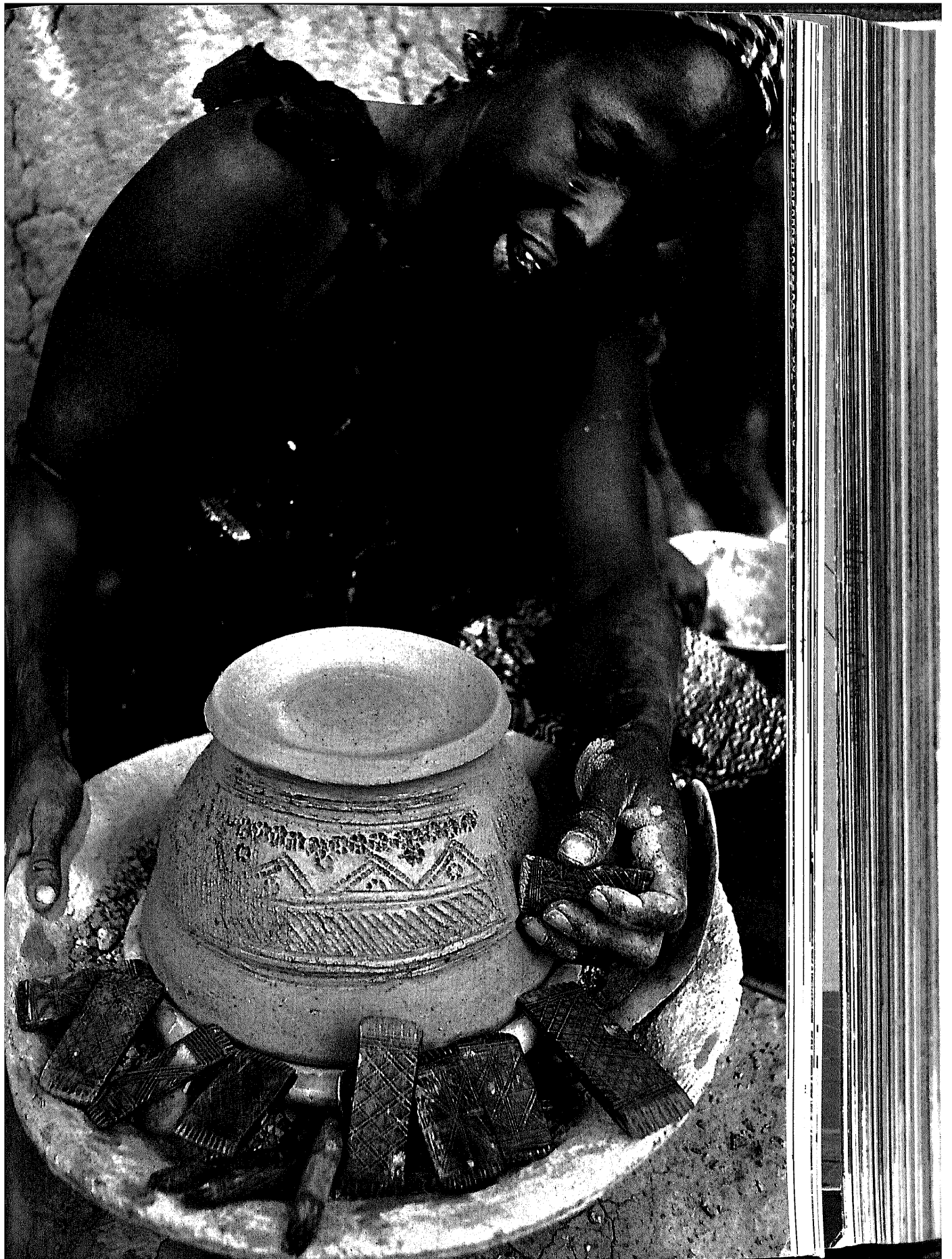
Nothing had changed. Jenne was still without electricity and running water. Bleating sheep and goats still scuttled through the narrow alleys. Street vendors dozed under grass-mat shelters in the noon-day sun. Very much a traditional African town, Jenne displays handsome, geometric mud-brick architecture that—fortunately, in our view—overshadows the few colonial-style concrete buildings with metal roofs.

To work at Jenne-jeno, we would have to commute daily from Jenne, where we rented the second floor in a mud-brick house owned by a local merchant, Baba Traoré. His neighbors called him "Little Baba." Baba's brother, Dani, and his family occupied the ground floor. Stairs ascending in tight angles led from our apartment to the roof, where we spread out artifacts for study and where we slept in the summer heat.

Diggers were easy to find; many men were in town seeking work during the dry season, slack for agriculture, from January through April. There were the usual rumors, of course, that we would be digging up treasure from old tombs. But most applicants were earnest men with no thought of booty.

On January 4 we jounced out to the site in a springless donkey cart. As we creaked over the lumpy floodplain, we clung white-knuckled to the sideboards and gave up trying to talk through rattling teeth.

We began in the central part of the mound, the men digging with short-handled agricultural hoes made in Jenne. Many



mud-brick house foundations were visible. Domestic structures were a priority: They told us how people lived—what they ate, the tools they used, the jewelry they wore.

As we peeled back a meter of deposits in the first pit, seven wall footings appeared. In this well-to-do section of town, families lived in roomy, rectangular houses built of round mud bricks like residences in Jenne today. Ladies of the house wore jewelry and hair ornaments fashioned by craftsmen from materials, such as copper and semiprecious stones, that could only have come from distant sources. Iron and stone bracelets came to light, and iron and copper rings.

Bones, grain remnants, even the kind of utensils showed that everyone in this part of town dined nutritiously on catfish, perch, rice, beef, and presumably milk.

Using pottery styles as dating benchmarks, cross-checked by radiocarbon analysis, we determined that all this was going

on at Jenne-jeno from A.D. 1000 to 1200.

A month of hard labor—and we had only reached a depth of one meter in the large central pit, which we called LX for large exposure. Other pits bore designations such as WFL, waterfront location; NWS, north wall section; and ALS, Adria's last stand, where student Adria LaViolette did excellent work. Potsherds showed we were now digging in the horizon of A.D. 800-1000.

Soil Deposits Pose a Riddle

Puzzlingly, the soil began to change character. In the southern half of the LX pit we traced several large holes filled with broken pottery and bones. Were these originally storage pits, or graves, or rubbish dumps?

Just north of the holes we uncovered three basin-shaped areas of fire-reddened clay filled with ash. Adria, supervising work in the pit, shared with us her uncertainty.

"I can't figure out how all these things fit



Toys made from river mud, miniature clay camels and cattle are a common sight in modern Jenne (above). Broken pieces of clay—still recognizable as cows, sheep, and a Niger-dwelling manatee—found at ancient Jenne by the McIntoshes were immediately identified by their workmen as toys.

together," she said. "There are those odd burned-clay concavities; in the rest of the pit the deposits are very hard in some spots and soft in others. It just doesn't make sense."

Trowel in hand, I began probing the troubling deposits. Finding a spot where hard, compact earth had soft material beside it, I inched along on hands and knees, tracing the interface. The line of compact deposits lengthened into an arc. Suddenly the picture snapped into focus. We had delineated the foundation of a round house—an entire round house! The three enigmatic baked-clay structures at once made sense as cooking hearths outside the house. The pits to the south were garbage dumps.

At least some were. Two turned out to be graves containing deeply buried urns. These shapely orange-red vessels, some a meter high, came to light all over the mound in cemetery areas and within or beside houses. We excavated about two dozen of them,

many still intact (pages 396-7). Many, many more were (and still are) visible, eroding out of the surface of the site.

We found bones in all the urns; the dead had been interred doubled up in the fetal position. Put in place over a span of more than a thousand years, A.D. 300-1400, the big pots often were crushed by later burials superimposed at the same spots.

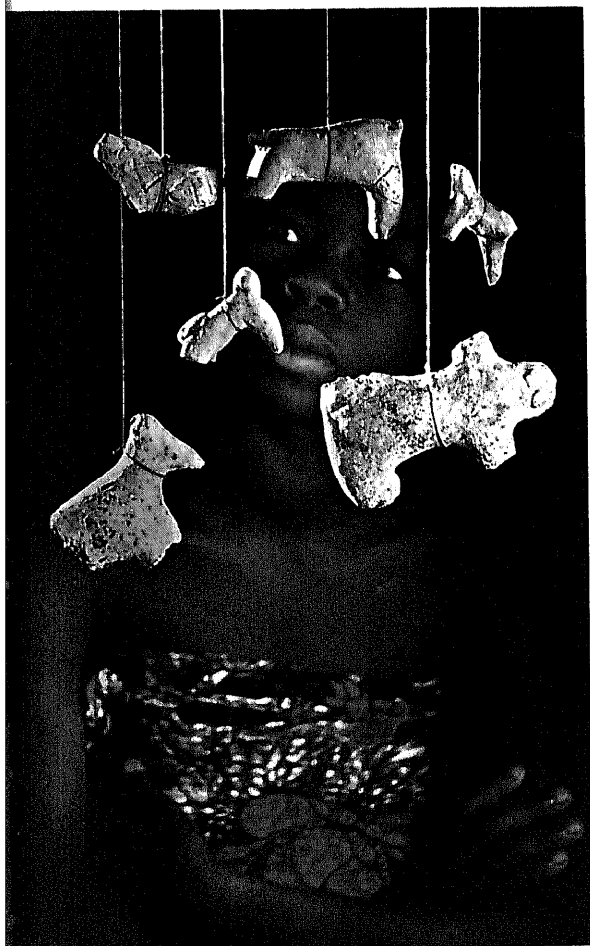
Here again, continuity linked the old and new Jenne: The custom of urn burial is practiced today among the Bobos and other Malian tribes not converted to Islam.

Painstaking work revealed, brick by brick, the entire round-house foundation. Then a shout rose from the workmen. A patch of deep orange terra-cotta shone against the light gray bricks. In minutes we uncovered the headless torsos of a pair of terra-cotta statuettes. Male and female, side by side, they had been set into a niche within the house wall. The heads had been broken off and lost, doubtless sometime when the figures had been exposed at ground level.

Their shrinelike positioning cast light on three similar statuettes we had discovered in 1977. All were in a kneeling posture, with short skirts or loincloths; all had been set into a wall or placed under the floor. Why had the people thought it important to incorporate them in their house structures?

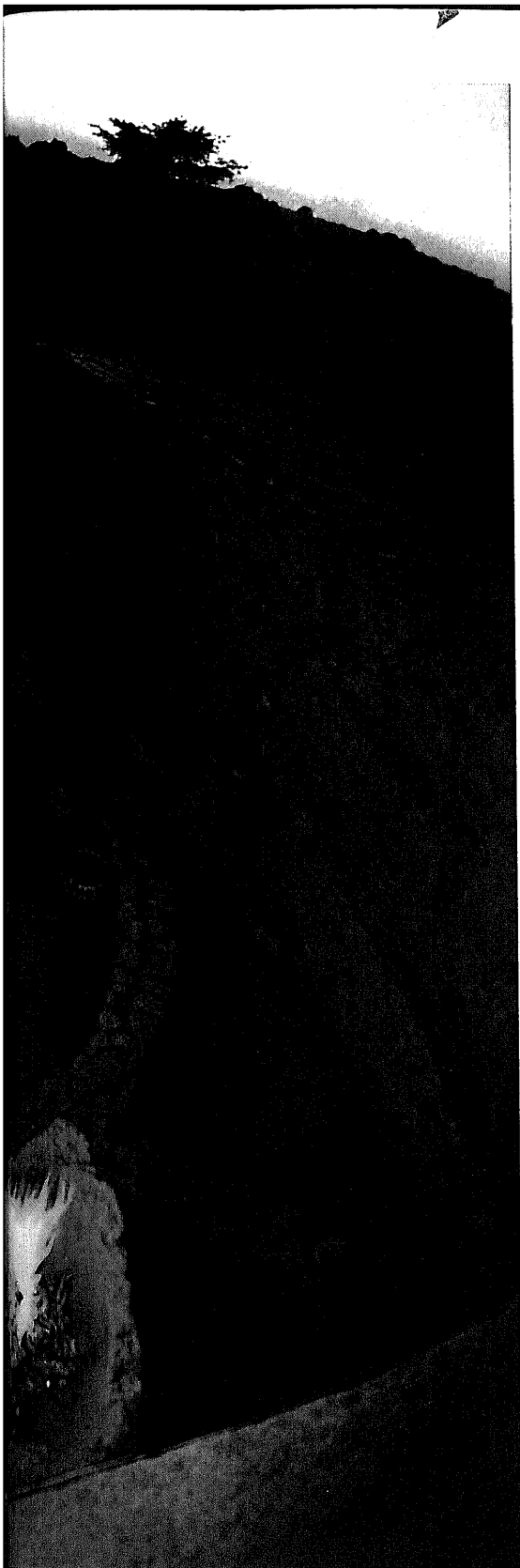
Again, modern Jenne provided a parallel. In the early 1900s a colonial administrator noted that many entryways in Jenne houses had a small altar, a platform supporting a statuette in the likeness of a revered ancestor. At the shrine, sacrifices could be made to the deceased. We think it is possible to trace this custom of ancestor worship back a thousand years to Jenne-jeno. The kneeling statuettes from the ancient city may well represent protective ancestral spirits once invoked by its inhabitants.

Word spread rapidly of the round-house discovery. Mr. Be Sao, chief mason of Jenne, bicycled out to the site. He pronounced the structure a female residence; the attached cooking ovens left no doubt. Mr. Sao pointed out that such houses still can be found in rural Mali. Mud walls that we found reaching out from opposite sides of the round house, he confidently informed us, would have joined the house with others arranged roughly in a circle to form a family





Foundation of family life, a round mud-brick house, excavated to its floor, probably once sheltered a wife and her children. The husband's other families lived in connecting



dwelling. In this reenactment, braziers flame in ancient hearths.

compound, sheltering separately two or more wives and the man who was husband of all. Other compounds crowded close.

Mr. Sao's analysis was persuasive. As he talked and gestured, Jenne-jeno of A.D. 800 came alive for us. His words evoked narrow alleys, barely wide enough for a donkey or a woman bearing on her head a day's wood supply, twisting among the compounds.

By late February, Jenne-jeno heated up at noonday to 43°C (110°F). The harmattan, a desiccating wind from the Sahara, swept across the floodplain daily. The relentless pummeling frayed everyone's nerves. Gusts swirled into the pits, flinging loose dirt in our faces. At the suggestion of our Fulani friend Hama Bocoum, we quickly adopted the headgear of the local herders of his tribe—three meters of cotton cloth wrapped several times around the head, nose, and mouth. Unavoidably, the eyes still suffered.

Jenne-jeno kept on yielding quantities of artifacts and data. Rich finds included iron spears and harpoons, and ceramic cows and sheep that were children's toys. It took Rod and me and our three assistants more than four hours every afternoon to number and catalog everything found earlier in the day. Most tedious was describing and analyzing the more than 100,000 pottery sherds. Properly studied, pottery can elucidate the advancement and social organization of its makers, as well as furnish chronology.

Pottery Dates Advance New Idea

One March afternoon I studied some pottery brought in the day before. On a table I laid out several large pieces of exquisitely made pottery with geometric designs painted in white over a glowing deep red slip.

"We just got these out of the LX pit," I said to Rod. "Our 1977 pottery data, you remember, and the radiocarbon dates told us that white-on-red pottery like this was made only between A.D. 400 and 800. Well, I've been examining the pottery from our other five pits. They all produced this pottery."

Rod's interest sharpened. "But those pits are scattered all over Jenne-jeno," he said, "two of them at the edge of the mound. We have to walk nearly a kilometer just to get from one pit to another. Are you saying that the mound, all 80 acres of it, was already in existence as early as 1,500 years ago?"

"The dating of the pottery shows there's no doubt," I responded.

Both of us exulted over this solid evidence that Jenne-jeno had expanded much farther at an earlier date than had seemed possible. It was, perhaps, our biggest discovery there.

The evidence was unequivocal: Jenne-jeno was a major settlement several centuries before the Arabs first established trading posts in the Sahara. But could we really call the site, no matter how large it was, a true city at that time?

Various lines of evidence suggest that we can. Within days after we discovered the pottery tie-in, a new trench dug through the mud-brick foundation of the massive city wall began producing early white-on-red pottery. Although centuries of erosion have leveled this once formidable wall, three-meter-wide sections of it can be traced over almost the whole two-kilometer perimeter of the site. Erecting it was a major public-works project, the kind that we expect urban populations to undertake. And it was built at Jenne-jeno sometime between A.D. 400 and 800.

City Prospers on Trade

At the height of development Jenne-jeno and its nearby satellites may have had close to 20,000 people. This large population was served by specialists, including well-trained potters to judge from ceramic quality. And we found the remains of copper- and iron-working ateliers, even though neither copper nor iron is native to this area. The closest iron ore is found more than 50 kilometers away. All accessible sources of copper are in the Sahara, 1,000 kilometers distant. Sandstone slabs and cylinders, used as grinding stones, came 100 kilometers from the north.

Who organized the trade that brought these materials to Jenne-jeno in the fifth century? Certainly not the Arabs, since they didn't appear on the scene for at least another 400 years.

No evidence has turned up of a foreign hand directing the early Saharan commerce that nourished Jenne-jeno. No Roman or Byzantine or Egyptian imports have been unearthed on the site. The trade in the mid-first millennium seems to have been indigenous—initiated and developed by Africans.

Seemingly, the inhabitants of Jenne-jeno

were always traders, even when they settled the site around 250 B.C. They had to barter for two vital materials that the floodplain lacked—iron and stone. From such humble origins, we believe, commerce gradually expanded to tap Saharan copper and salt.

What did Jenne-jeno offer in exchange to tempt desert nomads to mine for copper and to quarry salt? Archaeological evidence gives no clear answer. But the trading activities of present-day Jenne provide clues to Jenne-jeno's economic past.

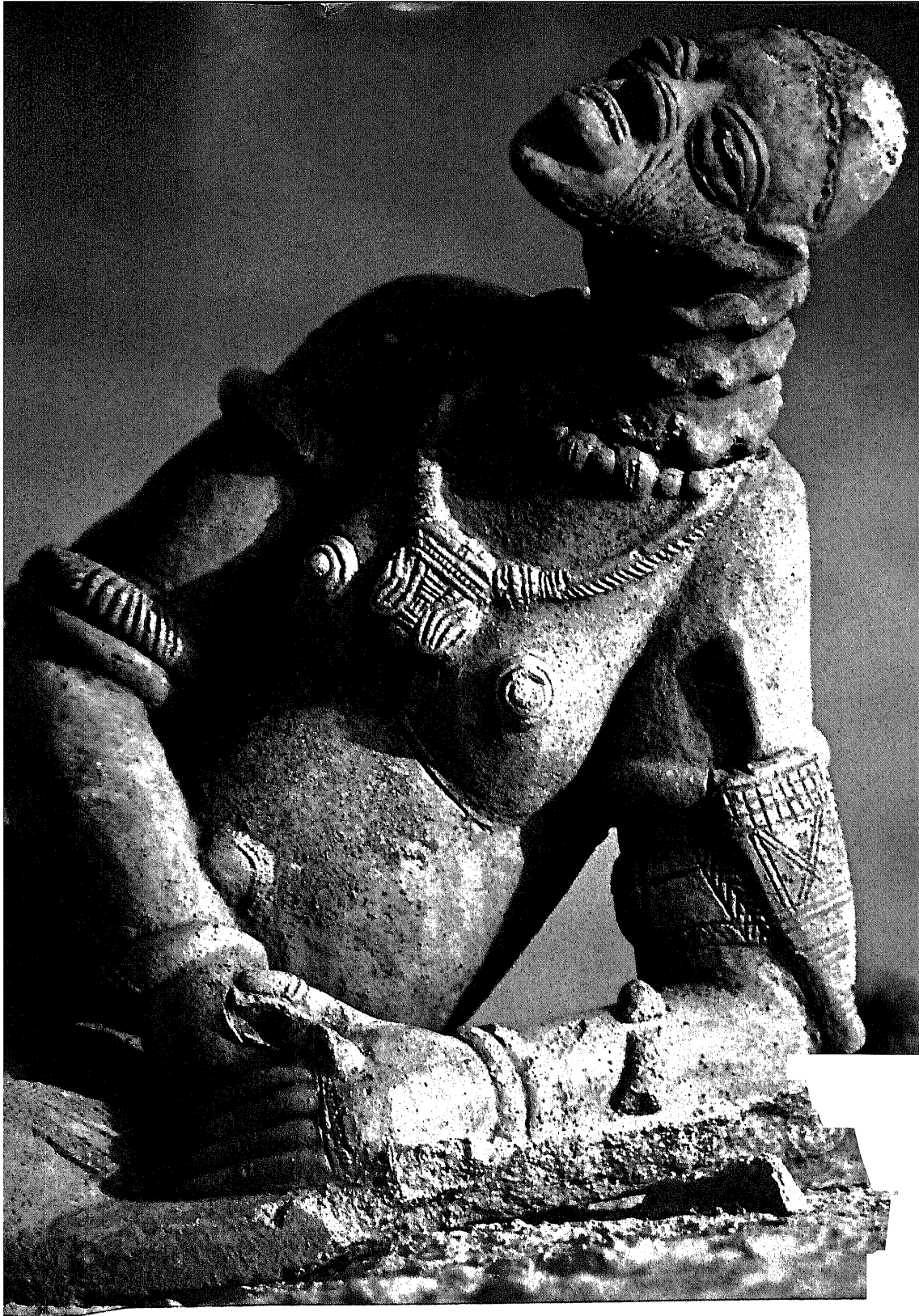
For 600 years Jenne's major export has been food. This land owes its richness to the annual silt-bearing flood of the Niger. Huge surpluses of rice and other crops can be grown. The nearby river offers endless fish—Nile perch and several kinds of catfish. What could be more appealing to a desert dweller than a reliable supply of food?

For six centuries Jenne has traded downriver with Timbuktu, providing the fabled desert city with food in exchange for salt, copper, and many other goods from the north. In 1830, René Caillié, one of the first Europeans to reach Timbuktu, wrote that it "possesses no other resources but its trade in salt. . . . The inhabitants procure from Jenné every thing requisite for the supply of their wants."

The Monday market in Jenne still packs people into a public square as big as a football field. Many spend a whole day getting there: Some come by foot or donkey cart, others by river in flat-bottomed canoes—pirogues—the same kind that have long traded between Jenne and Timbuktu.

Many of the items bought and sold, we saw, have not changed in that time. In one corner a merchant hammers at gray-white slabs of salt from Saharan quarries. An old man in a flowing jellaba offers dates from Algerian oases. Throngs of people buy and sell local produce—bushels of red African rice, baskets of blackened smoked fish, small mountains of chili peppers and onions.

Islamic Jenne prospered from its luxury trade in salt and gold. In 1655, Al-Sadi, a native of Timbuktu and an imam of Jenne's mosque, described Jenne as "one of the great markets of the Muslim world. There the salt merchants of Taghaza [in the Sahara] meet merchants carrying gold from the mines of Bitou [to the south]. Because of this blessed



In majestic repose, a unique statuette of androgynous character likely had religious significance, indicated by serpents coiled around the neck and arm and an amulet of magical power. Found touching one another, head and torso fit together, but minor stylistic differences raise a slight question of whether they match.



city, caravans flock to Timbuktu from all points of the horizon." Even in the 19th century, Jenne was known as the Land of Gold, because so much of the long-distance gold trade passed through it. This raised the question in our minds whether gold had been traded at Jenne-jeno a thousand years or more earlier. Pre-Arab participation in the gold trade would help account for the city's rapid growth.

Would any gold come to light at Jenne-

jeno? The days passed and the excavation entered its fourth and last month. Then. . .

Rod was working near the southern edge of the mound when one of our Malian crew handed him a note. Charlie McNutt, the supervisor of the city-wall excavation, had written one electrifying word: "Gold." Rod grabbed his camera and sped across the site.

"What have you got, Charlie?" Rod asked, peering into the excavation.

"Sidi here was straightening up the trench



Houseboating nomads, the Bozo people (left) ply the Bani and the Niger. "They are most likely the descendants of the riverfolk who forged the link with the Timbuktu region," the authors claim.

walls when his hoe blade caught something. Turned out to be this piece of gold jewelry. The workers say it's an earring." Charlie held out the prize with elaborate casualness.

It was a stunning piece of craftsmanship (page 407). Two delicately curved arms ended in tiny spirals of gold wire. The surface glowed. We discovered later that not even the best goldsmiths in Bamako could precisely duplicate its gleaming mat finish.

Charlie pointed to a little hollow, directly

beneath the city wall, from which the treasure had been wrested.

"Then it came from these deposits *under* the city wall," Rod mused aloud. "That's perfect, absolutely perfect! It means that gold was reaching Jenne-jeno even before the city wall was built."

The discovery of gold perked us all up. The earring and its implications were discussed endlessly at mealtimes.

"If the gold trade was important enough to link Jenne-jeno with mines 800 kilometers south," asked site supervisor Karol Stoker one evening, "why isn't there more of it?"

"There probably is more gold," I said, "a lot of it. But look how huge this site is and how small and scattered our six pits are."

I compared Jenne-jeno to a big jar filled with hundreds of mixed cookies. If someone reached in for a favorite kind—say chocolate chip—and there were only a few of them in the jar, he might have to pull out a lot of cookies before getting a chocolate chip.

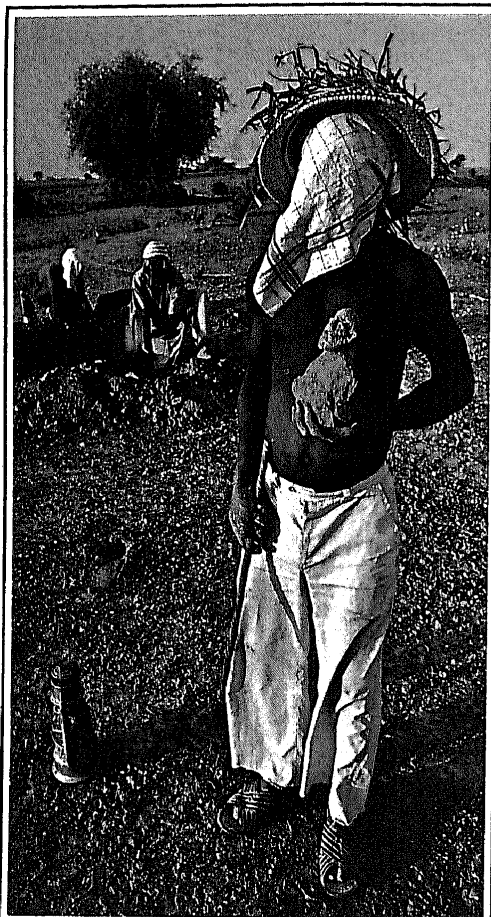
Rains End Excavation Season

In mid-April, clouds gathered over Jenne-jeno. Within three weeks the rains would drive blinding sheets across the site, carving jagged gullies. Before then we had to complete our excavations and backfill the pits.

Almost five meters down in the LX pit, we at last turned up pottery made by the first settlers at Jenne-jeno (page 408). It was beautiful, thin walled and light. Potters had decorated it by rolling braided twine across the wet clay surface. In today's Jenne we saw artisans beautifying their pots the same way.

Both in shape and in decoration, this fine ware strongly resembled pottery made between 2000 and 500 B.C. that has been found all over the southern Sahara. Thus we could identify the broad area from which Jenne-jeno attracted its first colonists.

By 250 B.C., when Jenne-jeno was founded, the Sahara had dried out. Geology and archaeology tell us, however, that before 3000 B.C. the Sahara was well watered, populated by cattle herders who also hunted and



Peasant turned scavenger agreed to display his treasure—a statuette he and his fellows dug from Jenne-jeno—but not his face at the site where he had found the statuette. It will be sold to a local art dealer and, escalating in price, pass finally to a collector.

Such trafficking, commonplace at sites throughout the world and supported by the high prices paid by collectors, outrages archaeologists. "The past is being destroyed," say the McIntoshes, "and we can never put those pieces together again." The authors saw some pits four meters deep and others several meters wide dug by nocturnal scavengers.

The Malian government, deeply concerned, has passed laws banning the practice, but enforcement is difficult. All artifacts legitimately recovered from Jenne-jeno have been transported to Bamako, the capital, for safekeeping. On an international level, a UNESCO convention seeks to prevent illegal traffic in cultural property.

fished in lakes and streams. As the Sahara grew arid, many herders were forced elsewhere to find water for their cattle, and the desert was almost emptied of its population. At some point, herders who had moved south became agriculturists and began using iron. Jenne-jeno was settled late in the course of this slow migration.

Initially, the settlement must have been no more than a tiny cluster of round pole-and-mud huts. Luckily for us, some of these burned to the ground. This fired the smooth mud plastering, preserving impressions of the underlying pole-and-woven-reed structures. Hundreds of these imprinted fragments of burned clay came to light in the lowest levels of our pits.

The newcomers to Jenne-jeno tended their cattle, planted rice, and fished. Their Iron Age hamlet resembled thousands throughout West Africa.

But as prospering Jenne-jeno grew into a city, a new, more cosmopolitan way of life evolved. Other communities sprang up within walking distance, producing a kind of urban sprawl. Within several centuries of the city's founding, the power of its wealth and commerce had completely transformed the scope and quality of human life on the Inland Delta floodplain.

Thriving Jenne-jeno Abandoned

A complex urban life-style flourished at Jenne-jeno for almost a thousand years. The reasons for the gradual population shift after A.D. 1200 to Jenne are unclear. They may relate to the transfer, documented in the city's oral traditions, of commercial power from pagan merchants' hands to those of an elite converted to Islam. This new aristocracy perhaps insisted that the new Jenne dissociate itself from the older city's polytheistic practices.

In the centuries since Jenne-jeno's abandonment, the dominance of Islam all but erased oral histories relating to the ancient pagan city. Only a few sentences have been handed down that suggest the true relationship of the two great urban centers that have dominated Mali's Inland Delta floodplain.

The ancestral site lay mute and forgotten—that is, until under our direction 20 men of modern Jenne sank hoes into the earth and uncovered their own past. □