FIG. 10. The completed lyre ready for its return to exhibition. The missing parts for which direct evidence was found during the conservation and restudy or in field records have been restored in frosted plastic. Parts that were known to have existed but for which there was no direct evidence have been restored in clear plastic.
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FIG. 11. Reconstruction of the original shape of the soundbox, showing how the lyre might have looked during use.
Drawing by Veronica Socha, 1997

BIBLIOGRAPHY
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Life on the Edge of the Marshes
Edward Ovbeenschlager

In 1968, archaeologists digging at the mound of al-Hiba in Iraq were struck by the fact that the people living in the surrounding area depended on many of the same resources, and seemed to use them in the same way, as the people who had lived there in the 3rd millennium BC. So while archaeological excavations continued, they initiated an ethnographic study of the modern villages around the mound (Fig. 1). The ethnoarchaeology project was carried out under my direction and lasted twenty years. Its goal was to cast light on the use of locally available raw materials, and on the function and manufacturing technology of the same or similar artifacts in antiquity.

The materials we focused on were mud or clay, reeds, wood, cattle, and sheep. We eventually added bitumen—a natural tarlike hydrocarbon—to the list because it appeared so often in conjunction with wood, reeds, and mud in the villages, as well as in the archaeo-
logical record. There was abundant evidence that many of the details of village life had parallels in the archaeological record. We hoped that knowing how people in the present day made and used the objects they needed for survival could help us make sense of the isolated bits of archaeological evidence and weave them into a coherent tapestry of ancient life.

The 2-mile-long mound of al-Hiba was in antiquity the ancient city-state of Lagash (see map on p. 3). It stood on the edge of a permanent marsh bordering a tributary of the Tigris, in southern Iraq, and lay about 75 kilometers north of Ur. Like Ur, Lagash was a major Sumerian city. It reached its greatest size in the Early Dynastic III period (2600–2350 BC), at the same time as the Royal Cemetery of Ur was in use. At that time Lagash was the capital of the Sumerian empire and probably the largest early Sumerian city.

The early years of the project were marked by the on-going removal of the shekhs (local hereditary leaders) by the central government of Iraq. As a result of the inevitable disruption in the management of the farmlands, these were times of unbelievable poverty for the people of al-Hiba. With the draining of the marshlands initiated in 1992, many thousands of marshland residents moved deeper into the swamps or fled to Iran. The way of life that we documented, and that I describe briefly here, no longer exists in the area around al-Hiba.

THE MI'DAN AND THE BENI HASSAN

When the project began, a number of small villages existed alongside the marshes near the site of al-Hiba (Fig. 2). Each contained the homes of either the Mi'dan (also called the Marsh Arabs) or the Beni Hassan. The Mi'dan villages were sometimes built directly on the marshes on platforms or islands they constructed of alternate layers of reed mats or reeds and silt.

The Mi'dan made a living by fishing with spears. They also kept water buffalo, technically undomesticated, which foraged for reeds and sedge in the marshes during the day and returned to the family shelter in late afternoon to give up their milk and spend the night under protection. The Mi'dan kept water buffalo primarily for milk, dung, and hides. Of the three, dung was the most important for it provided fuel for warmth and cooking, and was a waterproofing agent, a plaster for wounds, and a cure for headaches.

The Beni Hassan kept sheep and cattle and grazed them on the banks of the marsh. They raised crops of vegetables and animal fodder on plots of land which were sometimes irrigated. They also fished, but with set or throw nets.

Both tribes kept chickens, caught wild birds in nets or shot them with guns, and grew rice in small beds on the edges of the marshes. They moved between settlements by donkey or camel, or in bitumen-covered wooden boats (tarada) propelled through the water with long poles (Figs. 3.a, b, 4).

MUDHIF AND RABA

The Mi'dan and Beni Hassan built their houses and attendant structures from the same easily obtainable materials used to make similar buildings in ancient times—mud and reeds (Figs. 5.a, b, 6). In 1968 reeds grew everywhere in the marshes and were considered the cheapest building material. Because of its size and architectural splendor, the mudhif, a grand arched structure built entirely of reeds by sheikhs, would dominate the horizon as one approached a village lucky enough to preserve one. Justice was no longer dispensed here as it had been in the historical past, but issues were debated and consensus reached on local issues by the heads of families with or without the sheikh being present. The mudhif also still served as a guest house for the occasional traveler. (For details of reed construction, see Ochseneschlag 1992:47–58.)

Except in the fortified compounds of major sheikhs (who built with baked bricks as well), mud-brick structures were very rare, for they required the services of professional builders and were quite expensive. Family members could build pis (compressed or packed mud) houses without any assistance, however, and a small number of these existed in every village, where they were a status symbol indicating above-average
The Mu'dan had always fished with spears, "the manly way." During the 1970s, however, the Beni Hassan began to catch larger quantities of fish in nets. The solution for the Mi'dan is shown in this photo: they trapped fish in nets but harvested them with their spears.

Material resources. The raha (Fig. 1) was an arched reed structure smaller than the mudhif, while a one-room dwelling called a hay was made of reeds, mud brick, or pisé. Most of the village houses were made of reeds. The typical house was usually a little more than 2 meters wide, about 6 meters long, and a little less than 3 meters high. Houses built of reeds had the additional advantage of being portable. In the spring, if the marsh waters rose too high, a five-arched raha could be taken down, moved to higher ground, and re-erected in less than a day. With proper care and repair, reed dwellings could last for well over 25 years, and mud dwellings for two or more generations.

The raha had an entrance at both ends with a partition (bench or screen) in the middle. One end was used as a dwelling, the other end could be used to house animals in inclement weather, as a part of the dwelling, or as a workshop if either the wife or husband were craftpeople.

In villages where no mudhif existed, the second room of the largest raha often served the same purposes: as a meeting place and guest house. None of these uses were mutually exclusive; a thorough cleaning followed by laying reed mats over the dirt floor and placing colorful carpets for people to sit on quickly converted a workshop or barn into a reception room.

FENCES, WALLS, AND BARNs

To protect the family's water buffalo during the inclement weather of late winter and early spring, a Mi'dan household built an adjoining sira, another type of reed structure. Rows of tall reeds were buried in the ground with their tops tied together to form a sort of

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**Fig. 5a. Mudhif Under Construction.** Reeds had the same physical properties in the past as they do today, requiring similar innovations for structural soundness. For instance, if arches were made from bundles of fresh reeds, the structure would collapse in short order. For maximum soundness the core of a new arch bundle was made up of reeds taken from an older structure. From studying the physical properties of reeds used today, we have learned a great deal about the details of their use in the past.

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**Fig. 5b. Carved Gypsum Trough from Uruk.** Two lambs exit a reed structure identical to the present-day mudhif on this ceremonial trough from the site of Uruk in southern Iraq. Neither the leaves or plumes have been removed from the reeds which are tied together to form the arch. As a result, the crossed-over, feathered reeds create a decorative pattern along the length of the roof, a style most often seen in modern animal shelters built by the Mi'dan. Dating to ca. 3000 BC, the trough documents the extraordinary length of time such arched reed buildings have been in use.

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Fig. 6. A SHAGGY REED ENCLOSURE CALLED A SITRA serves as a pen for water buffalo. The small reed hut within the fence is seen end-on and looks similar to the structure on the Uruk trough but without the plumed top (Fig. 3b).

INSIDE THE RABA

Houses were divided in two different ways. A reed mat tied to a reed frame could be fastened to the sides and top of one of the arches. If both rooms were intended for living, the partition had a doorway or opening. Such partitions, however, were most often used without doors for separating living space from animal quarters. Living spaces were usually subdivided by a wide bench made of a tied reed framework and reed bundle top which jutted into the room from one of the long walls.

A chest made of wood, usually studded with iron or brass and with a domed lid, was placed on the women's or kitchen side of the bench. Towards the center of the women's side was a permanent place for the cooking fire. Mud bricks or narrow walls of pisé supported the vessels used for cooking or heating. The coffee pot (aluminum or brass) and tea kettle (aluminum) stood in close proximity, as did a variety of aluminum containers including a large, deep tray used for washing up and mixing, and one or two large bowls used for mixing, cooking, and sometimes serving. Conical bowls of various sizes made of aluminum, porcelain, or even plastic were also stored nearby. These were used for drinking water and for serving food. Those with bright, multicolored decorations, bought in market towns, were much sought after. To one side were the useful sun-dried mud objects made in every household. An aluminum or brass water jar or perhaps an old tea kettle stood near the door filled with water. This was carried by members of the family answering the call of nature and provided the water necessary for a thorough washing. If water was not available, one scrubbed oneself with sand.

Also near the door were the baskets used for collecting fresh animal dung, a job allotted to the youngest girls in the family. Women mixed the fresh dung with straw and molded it into disks to serve as the primary fuel for cooking and keeping warm. Along one side of the kitchen space was a shallow well dug in the floor and lined with bitumen in which sat two jars of similar shape and size: a water jar with drinking water and a jar for salt. These were made from coils of local clays by the village potter, and fired in a trench.

Near the bench, or perhaps even under it, were homemade baskets (either plaited or coiled) with staples such as wheat, rice, or dried fish, and perhaps a narrow-necked basket (sawb) with a variety of small packages of tea, coffee, and spices (Fig. 7). The latter three items might also be kept in the chest along with clothes, raw wool or wool spun into thread or yarn by family members, special amulets, jewelry, and money.

Some of these things were simply piled on the bench when not in use, as were woven bedclothes and pillows, carpets, paddles and poles for the boats used in the marshes, handmade fish and bird nets, agricultural or craft tools, and other family possessions.

The bench was seldom used as a sleeping platform at night except for the sick. Beds for small children were often made of piles of rushes with soft beds within on top. Swinging cradles for babies were made out of rushes and hung from an arch. A simple well was made in a bundle of rushes tied at both ends, and was lined with clothes, a sheepskin, or raw wool. Rattles made from sun-dried mud by fathers to amuse their babies were often inscribed with a smiling face, representing the child.

The other end of the raba was more sparsely furnished. When used exclusively as a part of the dwelling it contained a permanent hearth, otherwise a portable cooking dish (managla) was used as needed. Reed mats made by the women of the household covered the mud floor for living or guests. When guests were present the mats were covered with carpets made by the village weaver and pillows made by one of the women of the household. Even in the Madan houses without provision for livestock, water buffalo shared the quarters at special times, such as in the case of a birthing cow or a young calf whose mother had gone into the marshes to graze. When water buffalo or other livestock were quartered in the living space, the mats were removed. Often times the owner hooby-trapped both entrances to the raba at night to keep out intruders.

THE COURTYARD

Most of the year, the courtyard outside the raba was a hive of activity. Women prepared most of the food here. They cooked wheat bread disks on the insides of tanurs (inside bee-hives; see Fig. 1) where the raw dough was pasted on with a bit of water or spilt. Rice bread and small cakes were cooked on a flat disk of mud whose surface was heated in a fire. Meat and fish were baked or smoked in the tanur or boiled over a hearth and, on special occasions, roasted on spits over an open fire.

The courtyard is where women made dung patties and where young children made and played with their toys of mud and reed (Fig. 8a, b), and older boys made balls of sun-dried mud to use for ammunition in their slings (Fig. 9). The courtyard is where older girls embroidered the blankets which would be part of their wedding trousseaux and where men and women alike spun cord (Fig. 10). It is where the oldest woman in the family made containers of sun-dried mud when needed. All families had storage jars or chests made of reeds and mud and waterproofed with dung. People slept outside in the courtyard in the extreme heat of summer. The outside beds consisted of reeds placed on top of parallel walls of mud from 40 cm to 1 meter in height (Fig. 11a, b).

CONCLUSION

Archacized reed houses and buildings of mud brick and poles were well adapted to the marsh environment. We can conclude that in antiquity they were built in a very similar fashion to the way they have been built in modern times, in part because of the nature of the raw materials and in part because of direct evidence of manufacture from ancient strata (Ochenschlager 1992: 54-61). Some of the forms of sun-dried mud pottery are attested in Sumerian times by finds from al-Hiba. Preserved details of construction show that they were made in the same way as modern examples. Mud storage containers, jars, tanurs, ammunition for sling, and children's toys are widely known in antiquity from many sites. Ancient models of beds, perhaps made as toys, show the same raw materials used in the same fashion as the beds in modern courtyards (see Fig. 11b). (See Ochenschlager 1978a for a discussion of all these parallels.) Impressions of ancient reed baskets and mats exhibit the same techniques of construction as do modern ones (Ochenschlager 1992:64-66). Models of ancient boats (see Fig. 3b) show that they were very simi-
ilar to modern ones and built of the same materials (Ochsenschlager 1992:49-53).

Even without corroborating evidence, some ancient parallels with modern functions can be assumed. Although the materials did not exist in antiquity, some modern aluminum, tin, plastic, and porcelain containers probably have generally the same functions as the pottery of antiquity. The physical requirements of animals would lead us to believe that ancient animal husbandry had much in common with the modern (Ochsenschlager 1993a:33-42). In some cases, for instance in weaving, we can restore parts of the process and artifacts missing in the archaeological record (Ochsenschlager 1993b:54-55). Through knowledge of the process involved in the manufacture of an artifact we can estimate the actual value of that artifact to the people who made and used it by measuring the skill and time required for its production (Ochsenschlager 1998:129).

Other details of life in Sumerian times can be inferred from ethnographic information. We can understand and better appreciate, for example, the degree of coordination and skill required for everyday activities in ancient times because both ancient and modern peoples used similar artifacts for similar purposes. Indeed, the physical and mental energy expended by young men in mastering the throw-net, spear, and sling is akin to effort put forth by first-class athletes today. Like modern Iraqi villagers who, at the age of eight or younger, have jobs which are important to the survival of their families, Sumerian children were probably productive members of their society. In modern Western society where we appear to think that work deprives children of their "childhood," and there is little work that children can profitably do, children tend to live, by contrast, an undemanding parasitic existence, often to rather advanced ages.

More speculative, perhaps, are such things as the role of individuals or groups of people. For instance, Iraqi villagers and ancient Sumerian craftsmen dealt in raw materials and artifacts which were crucial to the survival of the entire community (unlike many modern craftsmen who make decorative accessories and think of themselves as artists). It is possible therefore that the two Middle Eastern groups may have enjoyed similar respect and played similar roles in preserving traditional morality and work ethics (Ochsenschlager 1998:130-33).

The findings of the ethnoarchaeological project were extremely helpful in interpreting the context of material remains and giving us some insight into everyday life at the site of ancient al-Hiba. But the acute and careful observation of the way of life of the Mi'dan and Beni Hassan also served to muddy the waters of archaeological interpretation. It brought home the complexity of behavioral and cultural choices and their impacts in ways that would be almost impossible to decipher from the archaeological record alone. Indeed, it soon became clear in the ethnographic study that one could not even easily understand the reasons for modern change unless one were present and privy to the conversations concerning it immediately before and during the process of the change itself. Shortly after change occurred the reasons for it often disappeared as part of a new mythology. Sometimes highly visible change is of little cultural significance, while major cultural change is accompanied
FIG. 10. A BENI HASSAN MAN spins thread using a spindle and raw wool. Men use the "drop and spin" method to create Z-spun thread, women rub the spindle on their thighs to create S-spun thread. Men create yarn by rubbing the threads together between the palms of their hands, while women use larger spindles which they rub on their thighs. The spinning of animal fibers into thread and yarn is attested in ancient times at al-Hiba (and U, by spindle whorls, impressions of cloth, and tw- and four-ply yarn found on jar sealings. Although spindles for making thread and yarn have not survived, one can infer their existence from the clay whorls that served to provide the weight.

FIG. 11A. BED IN AN OUTSIDE COURTYARD AT AL-HIBA. Bundles of reeds laid on low walls of mud and covered with reed mats provide safe places to sleep during the hottest weather. The raised beds share the courtyard with domestic animals and protect the sleepers against cattle, sheep, chickens, creepy-crawlers, and other things which go bump in the night.

by little or no change in the material record. Thus, these studies also serve to remind us that our knowledge of the past sometimes relies on shaky interpretations and cavalier assumptions, and show us that it is altogether too easy to misunderstand the significance of physical evidence (Ochsenschlager 1998).

ACKNOWLEDGMENTS
The excavations at al-Hiba were conducted under the auspices of the Metropolitan Museum of Art and the Institute of Fine Arts of New York University, and directed by Vaughn E. Crawford and Donald P. Hansen. Preliminary reports on the excavations can be found in the bibliography under their names and in the article authored by Robert Biggs.

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