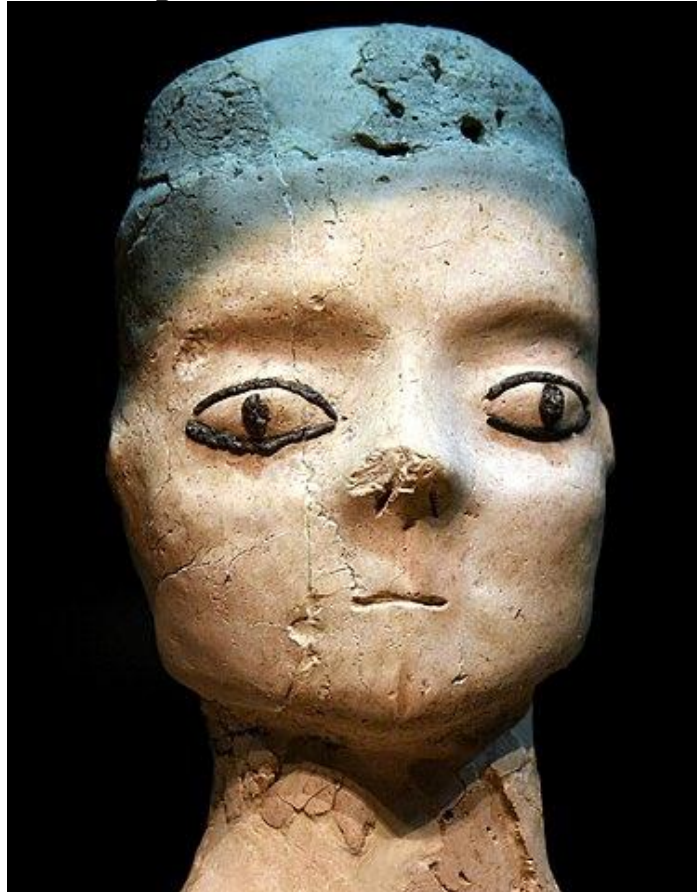


The Crucial Importance of Basket Weaving Technology for the World's First Civilizations

By Rick Doble



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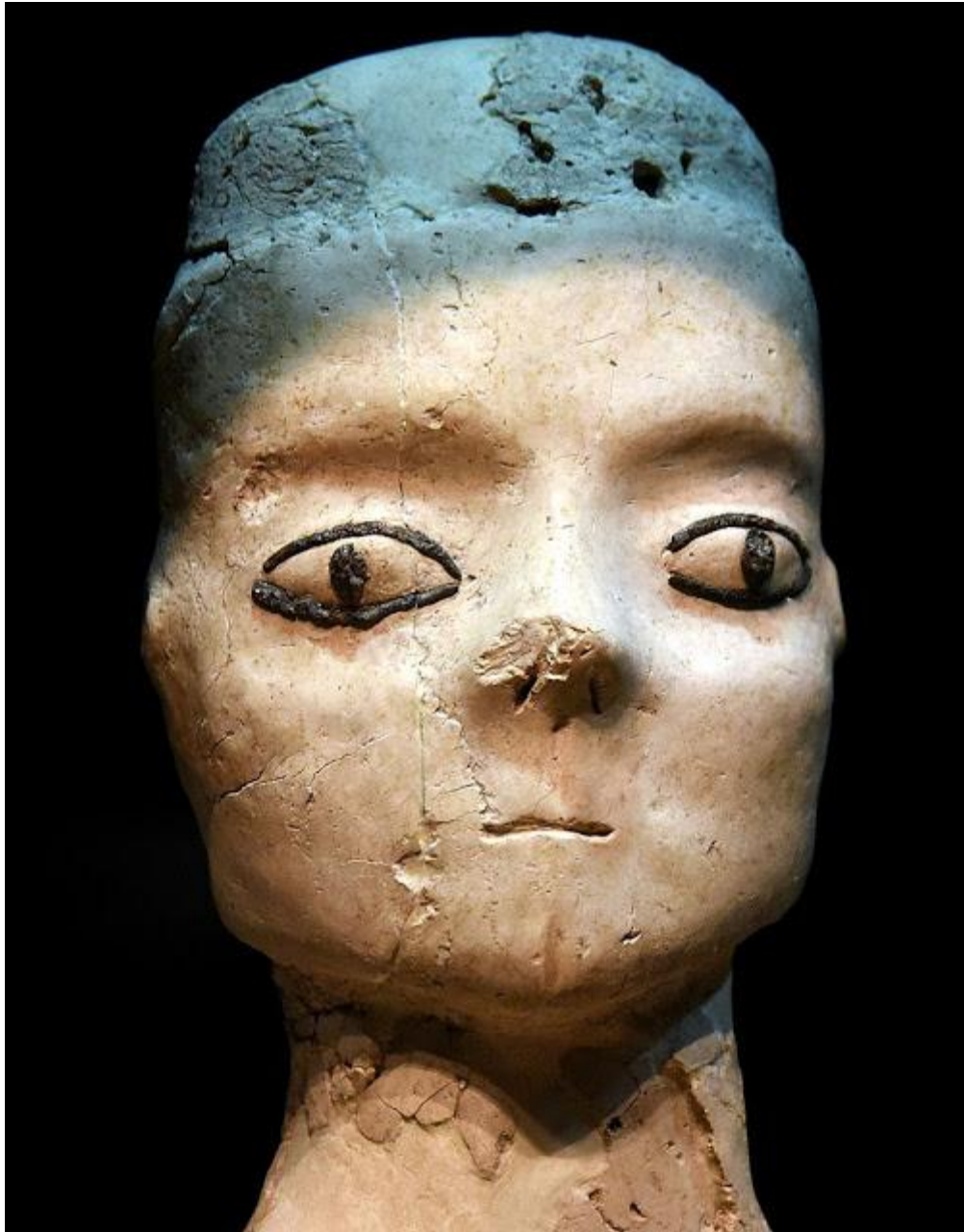
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This article is from my blog DeconstructingTime

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9,000-Year-Old Neolithic Statue

It Utilized A "Woven Reed Core Wrapped Tightly With Twine"

"Human statue from Ain Ghazal city, in the outskirt of Amman, Jordan. Pre-pottery Neolithic period B, 8th millennium BCE."

https://commons.wikimedia.org/wiki/File:Head_of_a_human_statue_from_Ain_Ghazal_city_in_Amman,_Jordan_Museum.jpg

The latest dating indicates that this figure was made 3000 years before the beginning of the Sumerian civilization, This means that basket weaving technology with reeds was quite advanced by the Neolithic Pre-Pottery B time period. (Ben-Nissan, Advances in Calcium Phosphate Biomaterials)

ABSTRACT: The rise of the world's first civilization, that of Sumer in Mesopotamia, could not have occurred without a fully developed basket weaving technology that was available from the beginning. This technology may have reached a high point thousands of years earlier as shown by the Ain Ghazal statues which had a sophisticated woven reed core. While this was not the only developed technology at the time, it was crucial. In this article, I make two main points.

#1. There is now clear physical evidence of basket weaving technology or reed craftsmanship (as the Sumerians also called it) long before the start of the Sumerian civilization. I list three examples of this evidence.

#2. The Sumerians were able to use their highly developed reed craftsmanship to establish the world's first civilization in part because of their weaving skills and because they had access to an unlimited number of reeds, plus mud, clay, and bitumen. In this article, I cite numerous studies and experts to further my argument. I cover sea-going reed ships, irrigation, agriculture, home building, mass-produced bricks, the importation of copper, and more. I also include an appendix in which I list more than 100 words relating to basket weaving technology, words that were used for thousands of years in Mesopotamia, indicating the importance of this technology.



https://commons.wikimedia.org/wiki/File:Head_of_a_two-headed_statue_from_Ain_Ghazal,_Jordan_Museum,_Amman.jpg

The following is quoted from an article about the Smithsonian exhibit of these ancient statues from Jordan at the Arthur M. Sackler Gallery. The exhibit ran 28 July 1996 -- 6 April 1997.

The statues were formed by **modeling wet plaster on a reed core**, using plants that grow in Jordan along streams and rivers. **The bundles of reeds were lashed together using twine.** The reed core provided a sturdy form onto which the plaster was modeled. Over time, this reed core disintegrated, leaving behind the plaster "shell" of the statue and a hollow interior. When modeled, the wet plaster took the impressions of the reeds and twine, which are beautifully preserved on the inside surface of the statue. Reed and twine were ideal materials for making the statues'

internal framework. The reeds are light, easy to bend when wet or damp, and locally available.

After the ancient artisans completed the reed and twine core, they applied plaster in dough-like consistency until they created the desired shape.

The head of each statue was modeled on a reed core wrapped tightly with twine to provide rigid support for the long, skinny neck. (Gunther, "Preserving Ancient Statues from Jordan")

PREFACE

Sumer had once been desolate marshland with but few scattered settlements and had only gradually come to be a bustling, thriving and complex community after many generations of struggle and toil in which human will and determination, man-laid plans and experiments, and man-made discoveries and inventions played a predominant role. (Kramer, *The Sumerians*, p. 34)

I believe that basket weaving technology (or 'woven-fiber technology', the alternate name I have suggested) was crucial to the development and emergence of the world's first civilization in Mesopotamia, the Sumerian culture. I do not believe that this first civilization could have blossomed without it.

In Sumerian times basket weaving was a general term that applied to a variety of weaving skills from small items to large structures. The highly revered 'Craft of Basket Weaving' (as listed in the important Sumerian MEs list of cultural essentials) was a general term that applied to a variety of weaving skills, skills that were essential for the growth of the world's first cities. This term was defined as also meaning 'reed craftsmanship' as stated in the Elementary Sumerian Glossary by Foxvog.

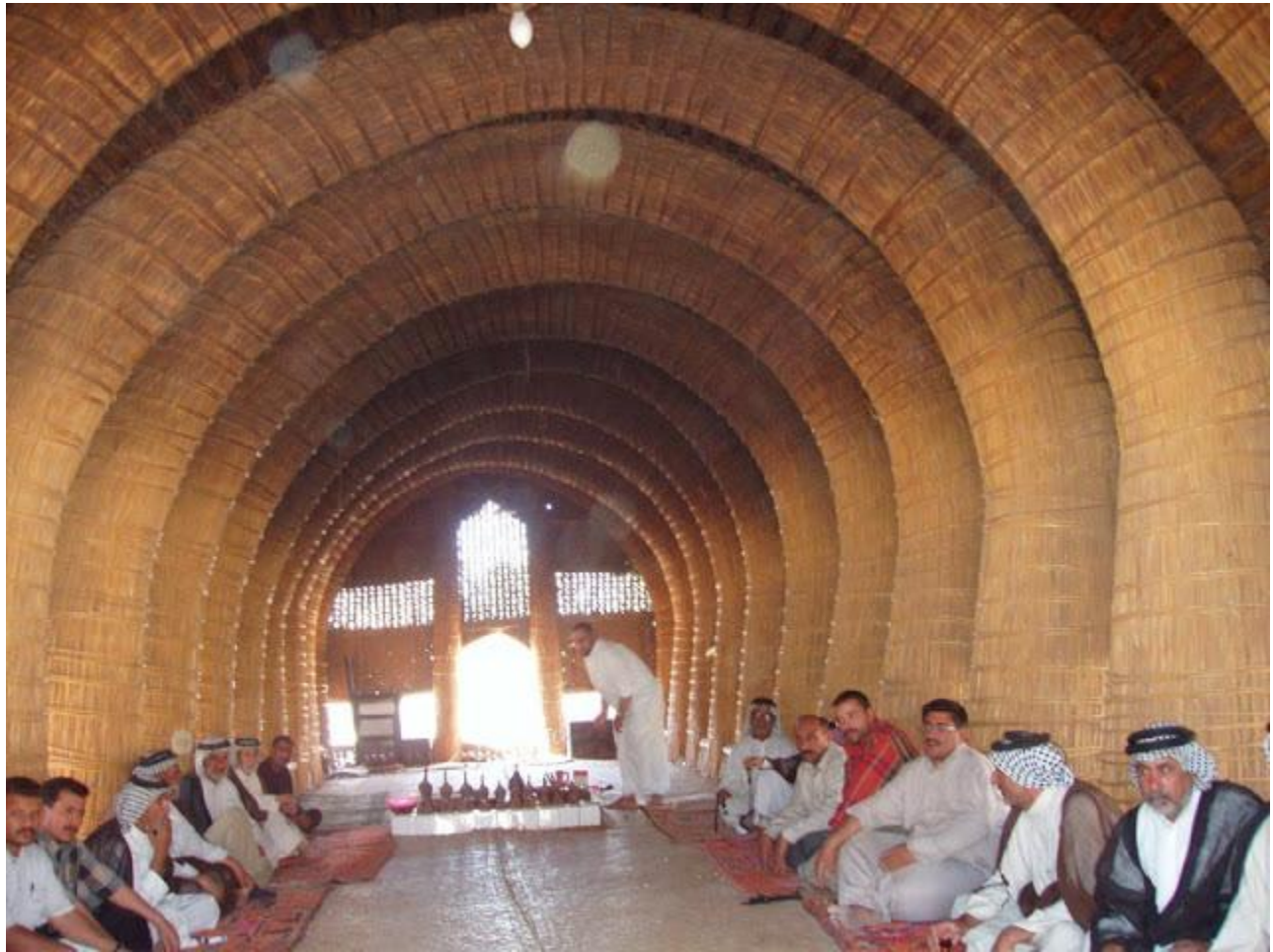
But, long before Sumer emerged as the world's first civilization, it is clear that this technology was quite advanced and that basket weaving technology, about a thousand years earlier, had reached a high point of development. For example, it had led to the construction of large sea-going ships made of bundled reeds that were sealed with bitumen.

The importance of basket weaving technology did not go unnoticed by the Sumerians. The power and symbolism of baskets, for example, was mythical -- as in the king's basket bearing ceremony when the king dedicated a new ziggurat, the magnificent temples of the Sumerians.

NOTE: This article is part of my series about the importance of basket weaving technology throughout human history, a technology that may have begun in the deep past.

AND

Basket weaving technology was also just as crucial to other emerging early civilizations such as that of Egypt, but for the purposes of this article I will concentrate on the first civilization, that of Sumer.



The interior of a mudhif made entirely of reeds.
This technology is at least 5000 years old, and perhaps older.
https://commons.wikimedia.org/wiki/File:Iraqi_mudhif_interior.jpg

INTRODUCTION

The name Mesopotamia comes from ancient Greek and translates to mean '[the land] between rivers', i.e., the land between the Tigris and the Euphrates rivers. And this is where the world's first civilization was created known as Sumer or Sumeria, with its prehistoric era beginning about 4100 BCE.

This land was very hot and dry with little rain and with a tangle of marshes filled with tall reeds, mud, and clay. And it experienced devastating floods at different times. There was no stone for buildings, no metal ores, and very little wood. It hardly seemed like a good place for the world's first civilization to emerge, much less to prosper. But that is exactly what happened. And it did so by turning all those elements, such as mud and marsh and the floods, into an advantage.

Central to the growth and development of this first civilization was basket weaving technology, or woven-fiber technology -- an alternate name that I have suggested. This is because reeds were one of the best materials for making baskets and many other woven items. The Sumerians were quite skilled at weaving reeds into a variety of configurations small and large. In addition, there was a plentiful supply of excellent quality bitumen, which when combined with reed items such as coatings for boats or coatings for baskets used as buckets, made them waterproof or able to hold water which was a key technology developed in the Neolithic era.

While it is difficult to establish exact dates for the beginning of this first civilization, with technologies such as complex irrigation and the mass production of bricks, these practices can be placed in general time periods such as millennia.

Before the rise of the Sumerians, the Ubaid Neolithic culture had preceded them. There is now clear evidence that reed ships were sailing the waters around Mesopotamia in the 6th millennium, well before the earliest beginnings of the first Sumerian cities which began toward the end of the 5th millennium or about 4100 BCE.

Reed boats were made with tight bundles of reeds which were then treated with bitumen to make the hull waterproof. This construction was basically basket weaving technology but on a large scale. Coiled baskets, for example, are made by bundling fibers. The recent discovery of these ancient reed boats shows that the Neolithic technology, at that time, with woven fibers was quite advanced. Later this fully developed technology was used in a variety of inventive and imaginative ways to help bring about the world's first civilization, including irrigation, agriculture, housing, and brick making.

The versatility and flexibility of basket weaving technology that was fully developed in the Neolithic (Ubaid) era along with an endless supply of reeds allowed the Sumerian culture to gain a foothold on the path to civilization. It was not the only technology but it was a fully developed fundamental technology that could be adapted to a wide variety of uses -- so, for example, while bricks were used in water management for irrigation, these bricks sat on a reed foundation that had been treated with bitumen, just as the sea-going ships had been coated with bitumen a thousand years earlier, and most early houses were grass houses that were made with bundled reed columns.

So as I said, while it would be almost impossible to nail down specific dates for the invention or beginning of a technology, it is very clear that sea-going reed ships existed long before the earliest beginnings of Sumerian civilization. This meant that basket weaving technology, as indicated by these ships, was quite advanced long before the Sumerians learned how to mass-produce sun-baked bricks, or invent writing, or invent the wheel.

The predominance of reeds, reed bundles, and reed structures points to their significance to early Sumerian economies.
(Pournelle, The Sumerian World Edition, pp. 28-29)

In this article I want to make two points:

#1. Neolithic basket weaving technology (or 'woven-fiber technology' as I have suggested) was fully developed and quite sophisticated in the area of Mesopotamia perhaps a thousand years before the important inventions occurred that led to the world's first cities in Sumer.

#2. Basket weaving technology was fundamental and foundational to the development of Sumerian inventions. Well-designed durable work baskets were essential for hauling clay to make bricks, for example. In another example, reeds treated with bitumen were used as foundations for irrigation 'gates' and irrigation was the most important technology for these early cities.

PLUS:

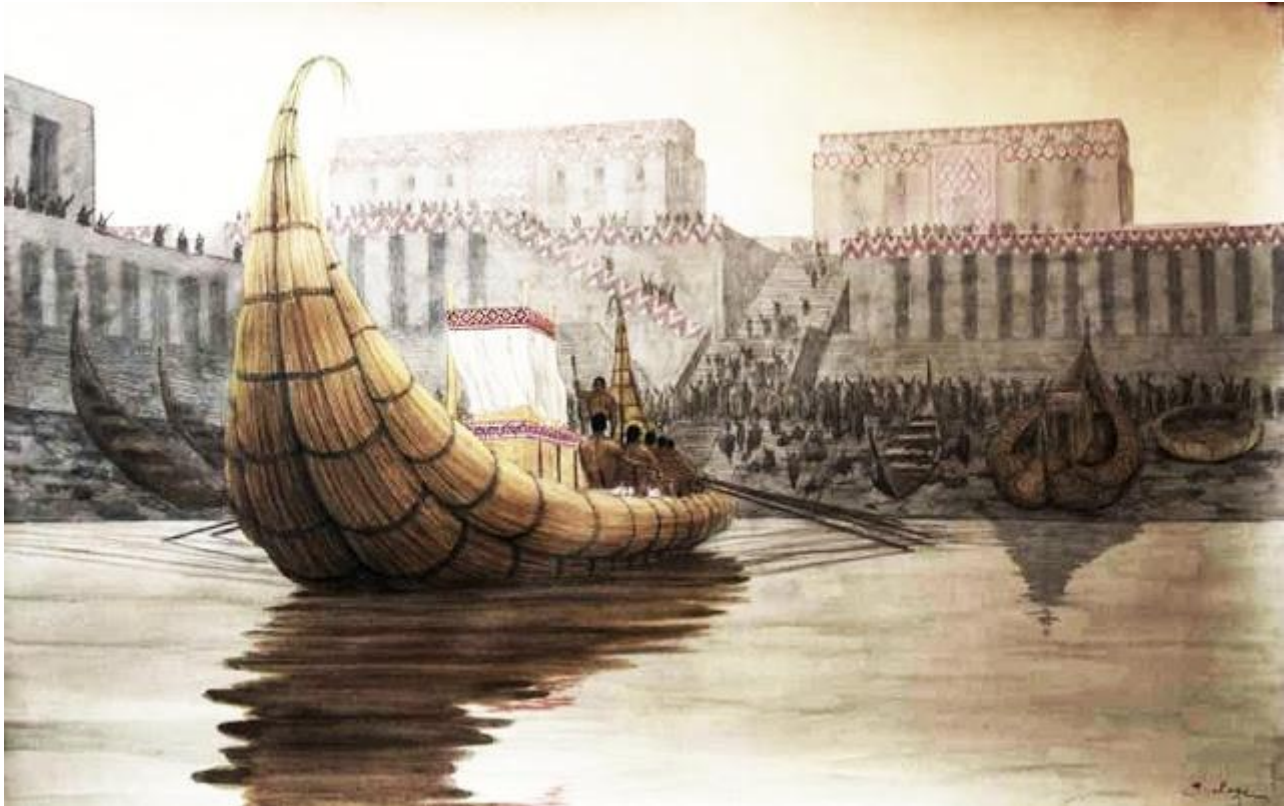
In addition, basket weaving technology was essential for the maintenance and continuation of the world's first cities. Without baskets and basket technology, irrigation, agriculture, and modest home building would have been almost impossible. Also, reed ships imported critical materials such as copper that was not available in Sumer and that were essential for these cities.

To make my case I will:

- Describe Pre-Sumerian basket weaving technology evidence from the remains of recently discovered Neolithic reed boats that sailed the waters around Mesopotamia.**
- Describe other examples of basket weaving technology that began well before the start of Sumerian culture.**
- Explain how basket-weaving technology worked with irrigation, agriculture, mass production of clay bricks, home building, shipbuilding, and more.**

PLEASE NOTE: I have only included those practices and artifacts that I could find reliable documentation for. I assume that there were many other ways that basketry was utilized, such as the use of baskets in agriculture during planting, harvesting, transporting, processing and storing but I could only find what I have listed here. Pictures from Egypt, for example, show an extensive use of baskets in agriculture, but I cannot find these for Sumer.

ABOUT NEOLITHIC REED SHIPS AND BASKET WEAVING TECHNOLOGY



This picture is of a large reed boat at the harbor; it was constructed using coiled basket weaving techniques. This is a fanciful, but perhaps not inaccurate, painting of a ship at the port of Eridu, considered to be the oldest city of the first civilization of Sumer about 5000 years ago.

https://commons.wikimedia.org/wiki/File:%D0%A0%D0%B5%D0%BA%D0%BE%D0%BD%D1%81%D1%82%D1%80%D1%83%D0%BA%D1%86%D1%8F_%D0%BB%D0%BE%D0%B4%D0%BA%D0%B8_%D1%83_%D0%BF%D1%80%D0%B8%D1%87%D0%B0%D0%BB%D0%B0_%D0%B2_%D0%AD%D1%80%D0%B8%D0%B4%D1%83_%D0%BD%D0%B0_%D0%BA%D0%BE%D1%82%D0%BE%D1%80%D1%8B%D1%85_%D0%BF%D0%BB%D0%B0%D0%B2%D0%B0_%D0%BB%D0%B8_%D0%B2_%D0%A3%D1%80%D1%83%D0%BA.jpg

The Neolithic Origins Of Seafaring In The Arabian Gulf

By Robert Carter

Investigations in Kuwait by our team from the Institute have revealed that maritime trade began as early as the sixth-millennium bc. The coastal site we have excavated has yielded fragments of the waterproof coating that covered seagoing vessels made of bundles of reeds. These fragments consist of bitumen slabs with reed impressions on one side and barnacles on the other. Other finds from the site include imported goods, a pottery model of a reed-bundle boat, and what appears to be a depiction of a sailing vessel – all testifying to the importance of maritime trade.

Analysis of the material from Ras al-Jinz has shown that the bitumen was combined with chopped reeds, carbonates, and possibly fish oil, to make an amalgam. This

process changed the physical properties of the bitumen, making it adhesive, tough, flexible, and light. [ED: This shows that even during the Neolithic era, an understanding of materials and their properties was quite advanced.]

Navigation in the Gulf during the Neolithic and Ubaid periods

The new discoveries...allow us to speculate on the mechanics of trade during the sixth and fifth millennia BC. First, the question of whether boats were used during the Neolithic period has been answered positively. The vessels were made of reed bundles, lashed together, and then coated with a bitumen amalgam – a technology that prefigures the techniques used to build trading vessels during the Bronze Age, some 3000 years later.

Existing evidence for trade

These new finds in Kuwait complement prior knowledge of a phase of interaction between southern Mesopotamia and the Arabian Gulf. Archaeologists have long speculated about a distinctive type of Mesopotamian pottery found in the Arabian Gulf region, known as Ubaid ware, which dates to the sixth and fifth millennia BC, and was made by the earliest known farming communities of southern Mesopotamia, now in Iraq. Some Ubaid settlements later became the mighty cities of the Sumerian civilization, such as Ur, Uruk, and Eridu, but during the Ubaid period city life and writing had not yet been developed, and settlements remained relatively small, sustained by agriculture, livestock herding and fishing. (Carter, "Neolithic origins of seafaring in the Arabian Gulf," pp.44-47)

Boat Remains And Maritime Trade In The Persian Gulf During The Sixth And Fifth Millennia BC By Robert Carter

"This find suggests that sailing was known by the Ubaid 3 period, [Ubaid 3 artifacts (5300–4700 BC)] and is the earliest known evidence for the use of mast and sail.

"These are fragments of the waterproof coating used to cover a reed-bundle hull, and represent the earliest boat remains in the Middle East, and the oldest known sea-going boat remains yet identified.

"The coating waterproofed the reed hull, protected it against mechanical damage and acted as an anti-fouling agent.

"These are impressions of the cords which held the reeds into bundles, or which lashed the bundles together to form a hull." (Carter, "Boat remains and maritime trade in the Persian Gulf during sixth and fifth millennia BC," pp. 52-63)



This is a model of Thor Heyerdahl's recreation of a reed ship, named the Tigris, which he built and sailed successfully in 1978. It covered 6800 kilometers during a voyage of 143 days, proving that large reed ships could have been constructed and were capable of carrying more than 25 tons. ("The Tigris expedition: a National Geographic special")

https://commons.wikimedia.org/wiki/File:Tigris_Model_Pyramids_of_Guimar.jpg

NOTE: Around the late third millenium wooden boats began to replace reed boats. However, a reed boat could carry 25-50 tons of material according to Thor Heyerdahl who built the Tigris to prove his point. So reed boats probably continued to be used. And small reed boats continued be used in the many canals.

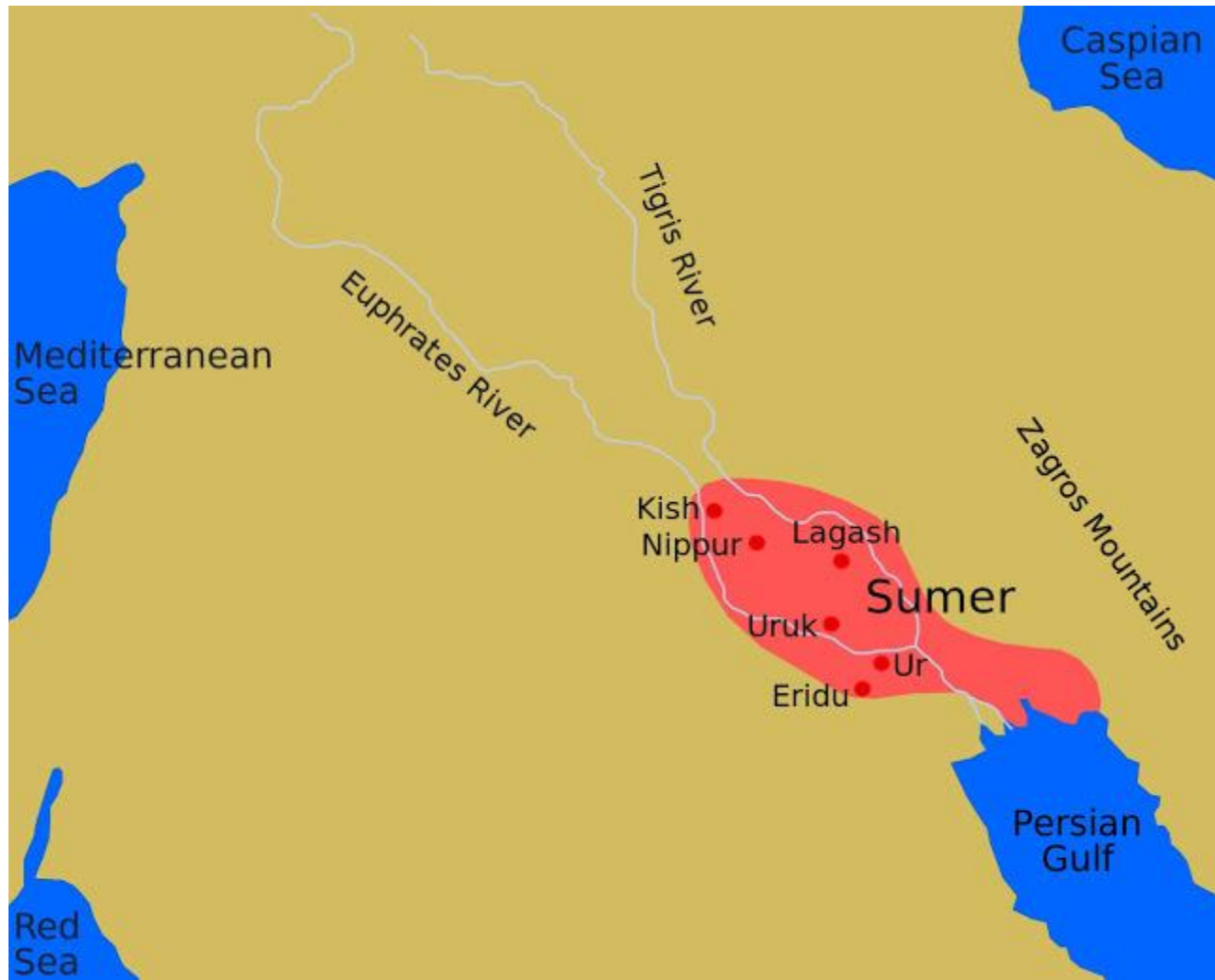
ANOTHER EXAMPLE OF EARLY BASKET WEAVING ADVANCED TECHNOLOGY



A pair of sandals from the Middle Neolithic. These are dated between 5200 and 4800 BCE (about 500 years before the beginning of Sumer) from the Cueva de Los Murciélagos (literally "Bats' Cave") in Albuñol (Province of Granada, Andalusia, Spain).
(National Archaeological Museum)

[https://commons.wikimedia.org/wiki/File:Sandalias_del_Neol%C3%ADtico_de_Albu%C3%B1ol_\(M.A.N._Inv._595_y_596\)_01.jpg](https://commons.wikimedia.org/wiki/File:Sandalias_del_Neol%C3%ADtico_de_Albu%C3%B1ol_(M.A.N._Inv._595_y_596)_01.jpg)

The Sumerian Civilization, The world's first civilization



ABOUT BITUMEN

In ancient times, bitumen (also called asphaltum or tar) was primarily a Mesopotamian monopoly. The "land between the rivers" was blessed, like no other land, with all sorts of petroleum deposits. From north to south along the Tigris and Euphrates rivers, the country was littered with bitumen seepages, crude oil springs and even bituminous rock which released crude oil when heated. (Bilkadi, Bitumen - A History)

It may seem strange to highlight bitumen at the start of this list of Sumerian woven constructions, but bitumen was often used in combination with reed craftsmanship. This was a powerful combination that allowed the construction of reed boats and coracle (basket) boats, the use of reeds as part of the dam system, and the sealing of reed buckets for lifting water with the shaduf device (next). Plus bitumen was used to waterproof fired bricks and seal the outside of buildings.

Bitumen was well known and understood even in the Upper and Middle Paleolithic era. So its properties and usage already had a long history that the Sumerians would have known about.

In a study entitled: "New evidence of adhesive as hafting material on Middle and Upper Palaeolithic artefacts from Gura Cheii-Râsnov Cave (Romania)" the researchers concluded that they had discovered bitumen usage by Paleolithic peoples. "All these hydrocarbons [found via chemical analysis] confirm that the black substance is highly weathered bitumen" (Cârciumaru et al., "New evidence of adhesive [bitumen]...on Middle and Upper Palaeolithic artefacts")

For example, "Bitumen caulking of the reed boats was made by applying a heated mixture of bitumen, vegetal matter, and mineral additives and allowing it to dry and cool to a tough, elastic covering." (Hirst, "Mesopotamian Reed Boats Changed the Stone Age.")

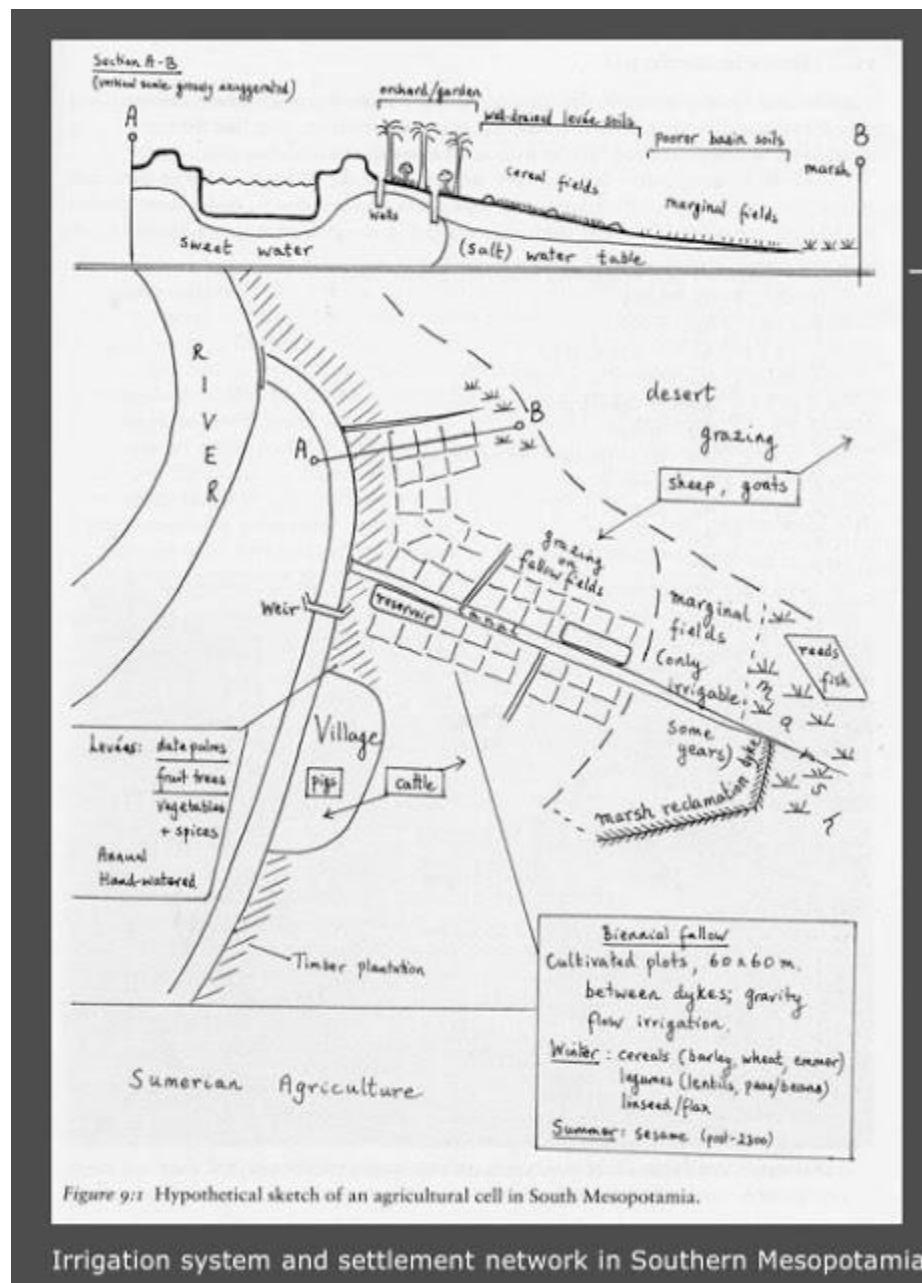
In addition to bitumen, archaeologists have recently discovered new coatings used with basketry 10,000 years ago.

The new analytical evidence obtained in this study has highlighted the diversity of materials comprising the exceptionally well-preserved organic coatings from artefacts of the Nahal Hemar cave, more than 10,000 years old. The complexity and originality of these coatings...is unique and the earliest known evidence of the use of these animal and plant products in the Near East. It represents a rare insight into the capacity of Neolithic people. Flax, already used for making strings, was domesticated, and employed in making textiles by twining...Several of the earliest Neolithic inventions demonstrating the experimental efforts needed to optimise resources for practical (strengthening baskets)...purposes. (Solazzo et al. "Identification of the earliest collagen- and plant-based coatings from Neolithic artefacts")

ABOUT IRRIGATION

Historians agree that the key to the successful rise of civilization in Sumer was due to irrigation. Irrigation led to surpluses and somewhat predictable crop yields which in turn allowed the cities to grow, prosper and diversify. Crop surpluses led to a

culture that could support non-farming citizens such as craftsmen, scribes, teachers, artisans, administrators, nobles, and priests. Basket weaving technology was a key part of the irrigation system and engineering from the very beginning.



(Postgate, Early Mesopotamia)

https://www.brown.edu/Departments/Joukowsky_Institute/courses/ancientneareast/files/9444529.ppt

There was one overriding factor which fostered a strong spirit of cooperation among individuals and communities alike: the complete dependence of Sumer on irrigation for its well-being – indeed, for its very existence. Irrigation is a complicated process requiring communal effort and organization. Canals had to be dug and kept in constant repair. The water had to be divided equitably among all concerned. (Kramer, *The Sumerians*, p. 5)

The first successful efforts to control the flow of water were made in Mesopotamia and Egypt, where the remains of the prehistoric irrigation works still exist.

In many places where fields were too high to receive water from the canals, water was drawn from the canals...by a shaduf. These consisted of a bucket on the end of a cord that hung from the long end of a pivoted boom, counterweighted at the short end. ("Irrigation Systems, Ancient," Water Encyclopedia)



(LEFT) One man using a shaduf.

https://commons.wikimedia.org/wiki/File:Chadouf_%C3%A9gyptien,_dessin_de_voyageur_de_1890..jpg

(RIGHT) Several men at each level using shadufs to raise the water much higher in a multi-tiered system.

[https://commons.wikimedia.org/wiki/File:Arts_et_m%C3%A9tiers._Vue_et_d%C3%A9tails_de_deux_machines_%C3%A0_arroser,_appell%C3%A9es_ch%C3%A2douf_et_ment%C3%A2l_\(NYPL_b14212718-1268823\).jpg](https://commons.wikimedia.org/wiki/File:Arts_et_m%C3%A9tiers._Vue_et_d%C3%A9tails_de_deux_machines_%C3%A0_arroser,_appell%C3%A9es_ch%C3%A2douf_et_ment%C3%A2l_(NYPL_b14212718-1268823).jpg)

About the Shaduf

Although it is often associated with ancient Egyptian culture, it was the Sumerians who invented the shaduf and were the first to use it. It was a simple but clever instrument for easily elevating a substantial amount of water to irrigate fields. Powered by an understanding of leverage, this flexible device was probably the most important invention in the history of civilization as it allowed farmers to bring in much higher crop yields and to deal with extended periods of drought. This device was so efficient and effective it is still used today.

It is estimated that one or two men can irrigate a quarter of an acre in 12 hours, for example a single shaduf could thus irrigate 0.1 ha of land in 12 hours [ED: or about a quarter of an acre]. (Stavros et al., "Evolution of Water Lifting Devices (Pumps) over the Centuries Worldwide")

Descriptions of this device usually state that a 'bucket' was attached to the water scooping end of the shaduf. Most people assume that meant a bucket made of metal. However, this device was invented before the smelting of copper, the first metal to be fabricated. So a basket sealed with bitumen was often used (or a skin bag).

In the Sumerian Glossary the word for bucket included reed, wood or copper:
"ba-an-du: (reed, wood or copper determinative) bucket, pail; sowing basket." (Foxvog, Elementary Sumerian Glossary)

As I have said, basket weaving technology was quite advanced at this stage so sturdy, reliable baskets sealed with bitumen were possible.

What Is a Shadoof?

A shadoof is a mechanical irrigation tool that was first developed in a part of western Asia called the Fertile Crescent more than 4,000 years ago. It is still used to draw water in many parts of the world that do not have ready access to electric water pumps.

In many ways, a shadoof resembles a seesaw. A strong pole, often made from wood or bamboo, is suspended across an upright structure so that the fulcrum sits roughly one-fifth of the way down its length. A heavy counterweight made from rocks and debris in a bucket, **basket** or animal hide is suspended from the short side of the pole, and a rope and bucket [*ED: which can be a basket sealed with bitumen -- see next*] are tied to the end of the long side.

The invention of the shadoof is believed to have revolutionized agriculture in the ancient world by dramatically improving the efficiency of small-scale irrigation. (Downs, What Is a Shadoof?)

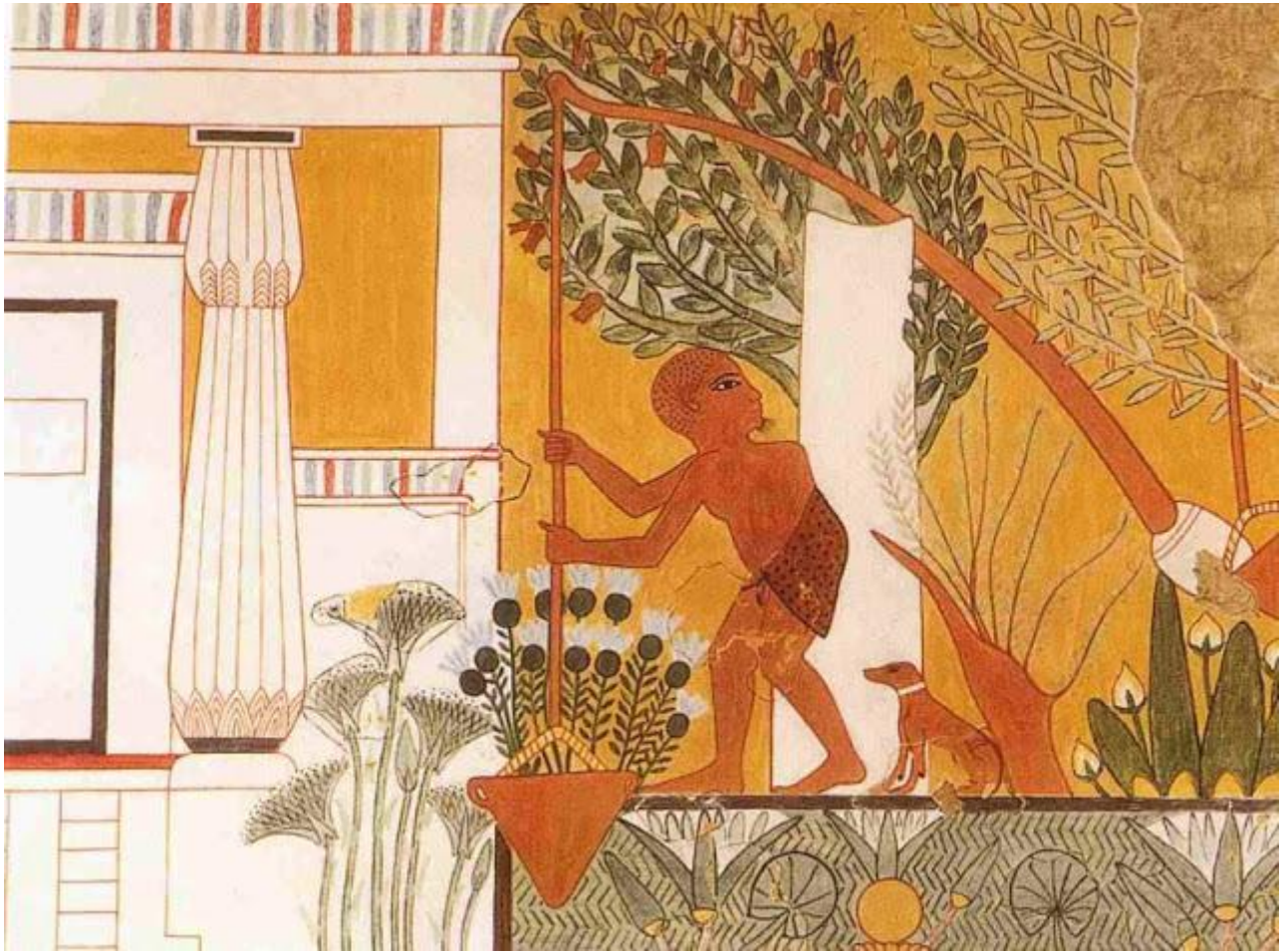
Shadoof

A shadoof, shaduf, dhenkli, picottah or counterpoise-lift, (an Arabic word, šaduf; also anciently known by the Greek name kelon or keloneion) is an irrigation tool. The shadoof was originally developed in ancient Mesopotamia. It is still used in many areas of Africa and Asia to draw water.

The shaduf consists of an upright frame on which is suspended a long pole or branch... at the long end of this pole hangs a bucket, skin bag, or **bitumen-coated reed basket**. When correctly balanced, the counterweight will support a half-filled bucket, so some effort is used to pull an empty bucket down to the water, but only the same effort is needed to lift a full bucket. (Shadoof, oilfieldwiki.com)

The Sumerians figured out how to collect and channel the overflow of the Tigris and Euphrates rivers—and the rich silt that it contained—and then use it to water and fertilize their farm fields. They designed complex systems of canals, with **dams constructed of reeds, palm trunks and mud whose gates could be opened or**

closed to regulate the flow of water. (Kiger, "9 Ancient Sumerian Inventions That Changed the World")



Egyptian picture of a man using a shaduf, circa 1300 BCE.

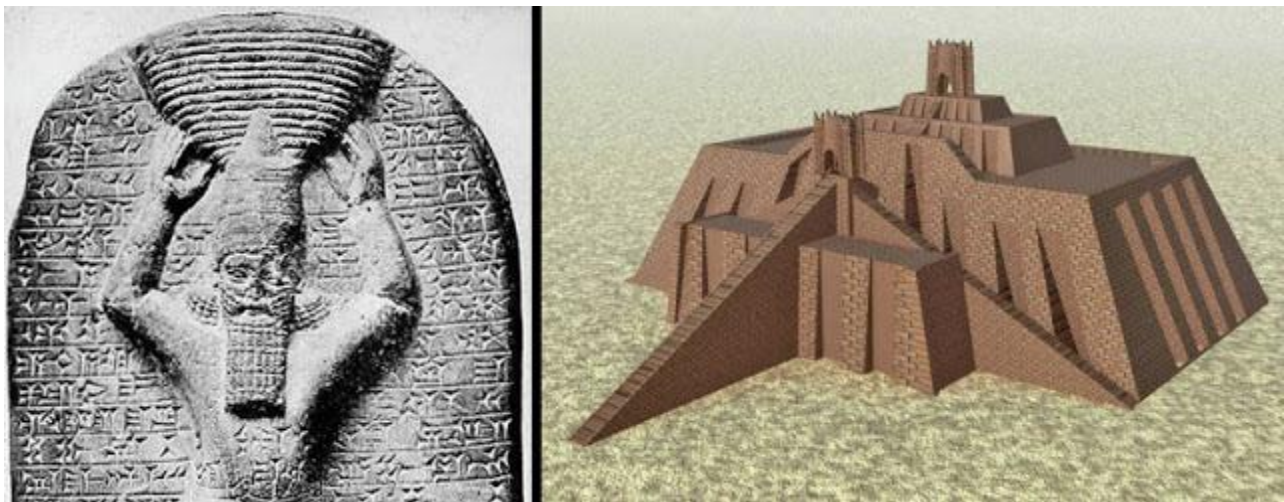
https://commons.wikimedia.org/wiki/File:Garden_Scene,_Tomb_of_Ipuy_MET_vs2973.jpg

Canals and levees formed the basis of land irrigation and flood control in ancient Sumer...This is an area of scarce rainfall but major flooding in late winter and spring. From around 3500 B.C. [*ED: the 4th millennium*] and over the next two millennia, **Sumerians pioneered control of the water flow and the development of agriculture whose produce would feed the populations of over 20 city states.**

Sumerians built up the levees by making foundations of reeds impregnated with bitumen...Baked mud bricks, also bonded with bitumen, were placed on top of the foundations. This not only increased the height of river banks, it also protected them from erosion by water currents. During dry periods, Sumerians made a simple drainage system by hoisting water in buckets [*ED: with shadufs*] over the levees and watered cultivated land. They also poked holes into the hard and dry levee walls, allowing the water to flow and irrigate crops in adjacent fields. (Kielmas, "Ancient Sumerian Levees & Canals")

MYTHOLOGY AND IRRIGATION

The following Sumerian creation story is about the gods handing over the work of managing the marshes because the gods were tired of the task. And a principal tool for working the channels was work baskets; they were used to move, collect and haul the clay that the marshes were made of. While the mythology cannot, of course, help historians establish a specific early date for basketry, it may be useful in other ways. The myth does convey the idea that working with baskets was primal and fundamental and that baskets had deep roots in the birth of Sumerian culture. These roots were so deep they held a mythical power, indicating that they were important for Sumerian survival. For example, for thousands of years, Sumerian kings performed a basket-bearing ceremony when a new temple, a ziggurat, was about to be constructed. The king carried a basket on his head in this ritual and the ritual was considered obligatory.



LEFT) King "Ashurbanipal as High Priest" with a basket on his head.

https://commons.wikimedia.org/wiki/File:Assurbanipal_als_hogepriester.jpg

(RIGHT) "Computer reconstruction of the Ziggurat of Ur-Nammu, currently located on the outskirts of Nasiriyah and built at the beginning of the 21st century BC."

https://commons.wikimedia.org/wiki/File:Ziggurat_of_ur.jpg

THE MYTH OF THE CREATION OF HUMANS WHO WERE BROUGHT INTO EXISTENCE TO TOIL WITH BASKETS

In the following creation myth, the minor gods were digging canals, piling up the silt, and crushing clay with their baskets. But after a while, they complained about bearing this toil. They persuaded the mother of the god Enki, Ninma, to convince her son, the creator of many things, to create human beings to do the work that the gods had been doing. Enki agreed and told his mother that after she created humans, she should "Impose on them the work of carrying baskets."

**THE WORKER GODS REBEL AGAINST THEIR TOIL
WITH THE LABOR-BASKET**
(Frymer-Kensky, translator, The Epic of Atra-Hasis Version 2)
edited for brevity by Rick Doble



The God Enki

https://commons.wikimedia.org/wiki/File:Copia_de_Enki.jpg

[1:1-73] When the gods bore the work, carried **the labor-basket- the labor-basket of the great gods-** the work was heavy, much was the distress. The seven great Anunnaki [the major gods] caused the Igigi [the minor gods] to bear the work. The Anunnaki had cast lots and divided [the Cosmos]: [they caused] the Igigi [to bear the work]. Forty more years . . . the Igigi bore the labor night and day. They wearied, complained, grumbled in the workpits. Enlil, the counselor of the gods, [encouraged them] “Now, engage battle, stir up war and hostilities.” The gods listened to his words. They set fire to their implements, to their spades [they set] fire, their labor-baskets into the flames they threw. “While Namma the birth-goddess is present, let the birth-goddess create the offspring, **let man bear the labor-basket of the gods.**”

They called the goddess and asked [her], the midwife of the gods, wise Namma: "You are the birth-goddess, creatress of man. **Create lullu-man [Primitive Man], let him bear the yoke. Let him bear the yoke...; let man carry the labor-basket of the gods.**"

Namma opened her mouth and said to the great gods, 'It is not properly mine to do these things.

Enki is the one who purifies all; let him give me the clay, and I will do it."

Enki opened his mouth and said to the great gods:

"At the new moon, the seventh day, and the full moon, I will set up a purifying bath.

Let them slaughter one god.

With his flesh and blood let Namma mix the clay.

God and man- let them be inseparably mixed in the clay; till the end of time

THE HUMAN RACE IS CREATED TO DO THE WORK OF THE GODS WITH THE LABOR-BASKET

[I:221-304) At the new moon, the seventh day, and the full moon, he set up a purifying bath.

Namma mixed the clay.

From the flesh of the god there was spirit.

She proclaimed "alive" as its sign.

After she had mixed the clay, she called the Anunnaki [the great gods]

The Igigi [the minor gods] cast their spittle on the clay.

Namma opened her mouth and said to the Igigis,

"You commanded me a task-I have completed it.

You slaughtered a god together with his rationality.

I have removed your heavy labor, have placed your labor-basket on man.

ABOUT AGRICULTURE

Sumerian Farmer's Almanac, as it is called, was the first farmer's almanac. It has been dated to circa 1600 BCE.

While the field is drying, let your obedient (household (workforce)) prepare your tools for you, make fast the yoke bar, hang up your new whips on nails, and let the hanging handles of your old whips be mended by the artisans. Let the bronze your tools "heed your arm"; let the leather "headbinder", goad, "mouth-opener", (and) whip uphold you (in matters requiring discipline and control); **let your bandu-basket crackle**; (all this) will make a mighty income for you.

(Kramer, The Sumerians pp. 340–342)

The bandu-basket was a hopper according to the Oracc Museum at the University of Pennsylvania. (epsd2, Oracc Museum)

bandu [HOPPER] N (0x) wr. ba-an-du5 "hopper, sowing basket"
bandudu [BASKET] N (139x) Early Dynastic IIIb, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian = "seeding basket of a plow; bucket"

And a hopper is defined as:

A container for a bulk material such as grain, rock, or trash, typically one that tapers downward and is able to discharge its contents at the bottom. (hopper definition, Lexico.com)

Mesopotamian Farming Tools

To carry the freshly cut harvest back to the settlement, Mesopotamians used baskets made out of reeds. Reeds grew abundantly in the marshes of the rivers. They provided excellent material for collecting and carrying goods from the field. Reeds also quickly grew back. They grew naturally in the area and did not have to be planted, watered, or harvested.

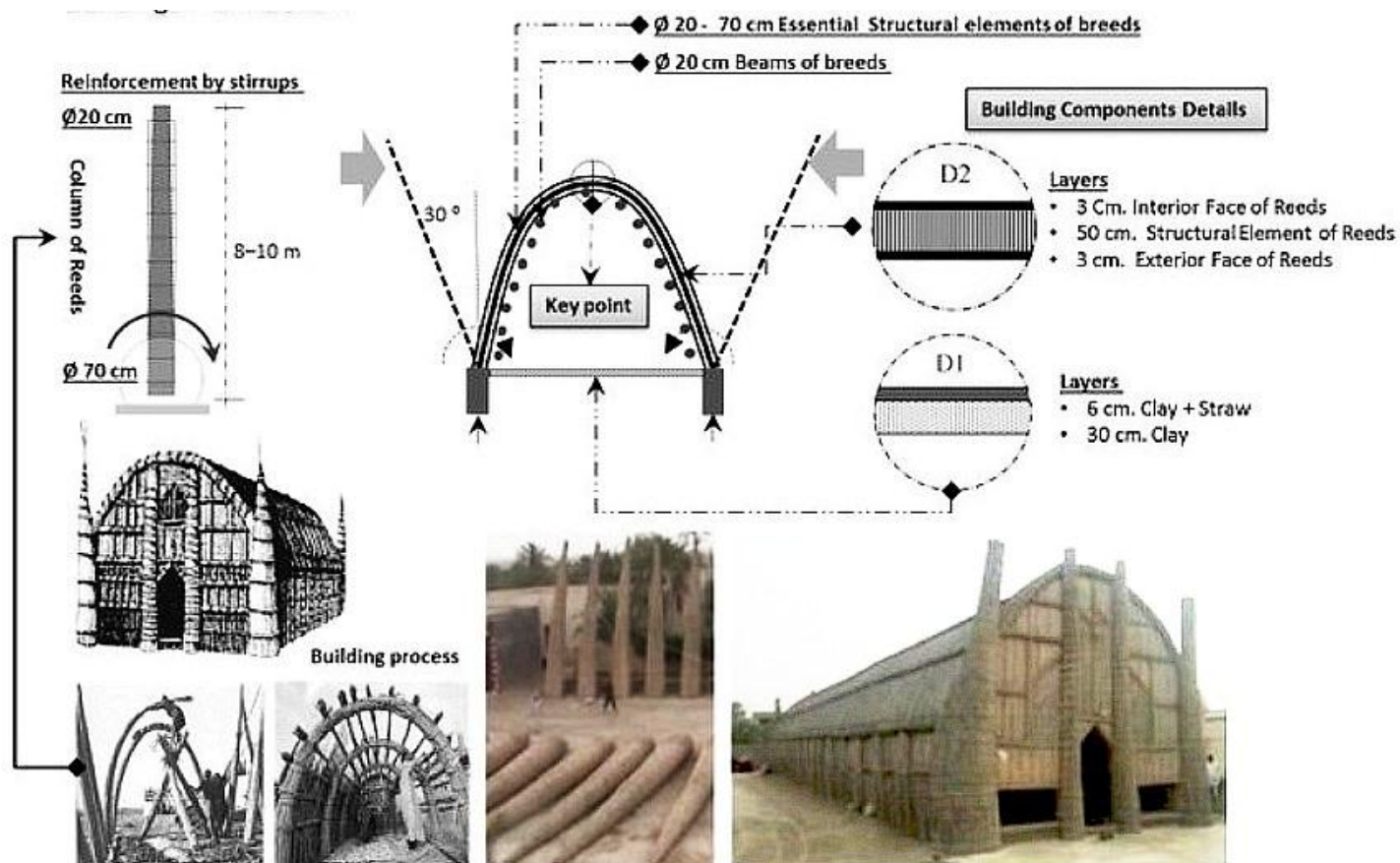
Early plows were made from wood. Later plows had copper parts, which broke up hard soil better.

("Mesopotamian Farming Tools," Discovery Education)

ABOUT HOUSING

There has been a misconception about housing in Sumerian cities. It was assumed that most of the homes were made of brick since brick was widely available. But many if not most were made from bundled marsh reeds. Known as grass houses, they were comfortable and well designed. Again, like the reed boats, these homes were built using basket weaving technology. While homes in the center of cities may have been made of brick, homes in the outlying villages and those away from the city center were often grass houses.

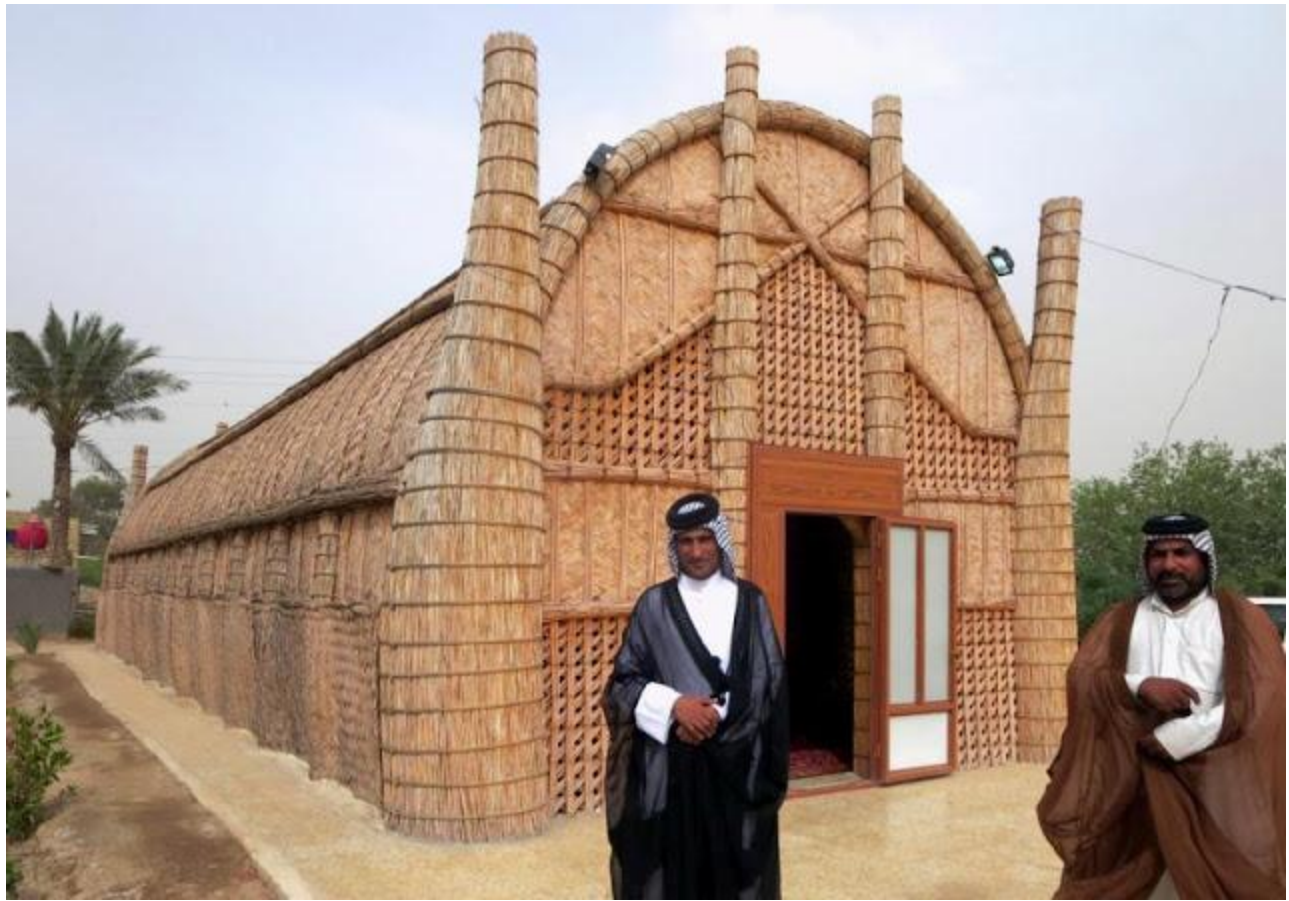
Large ceremonial buildings were called mudhifs and smaller family homes were called rabas. They were built using the same basic design. While evidence of the ancient structures has long since decayed, most historians believe that the basic technology for these buildings probably began in the Neolithic. So again, as I have stated in this article, advanced basket weaving technology or reed craftsmanship was available to the Sumerians from the earliest days of the civilization which gave it a head start.



Mudhif construction details. Image used with permission.

(Almusaed et al., "Building Materials in Eco-Energy houses from Iraq and Iran")

https://www.researchgate.net/publication/273480113_Building_Materials_in_Eco-Energy_houses_from_Iraq_and_Iran



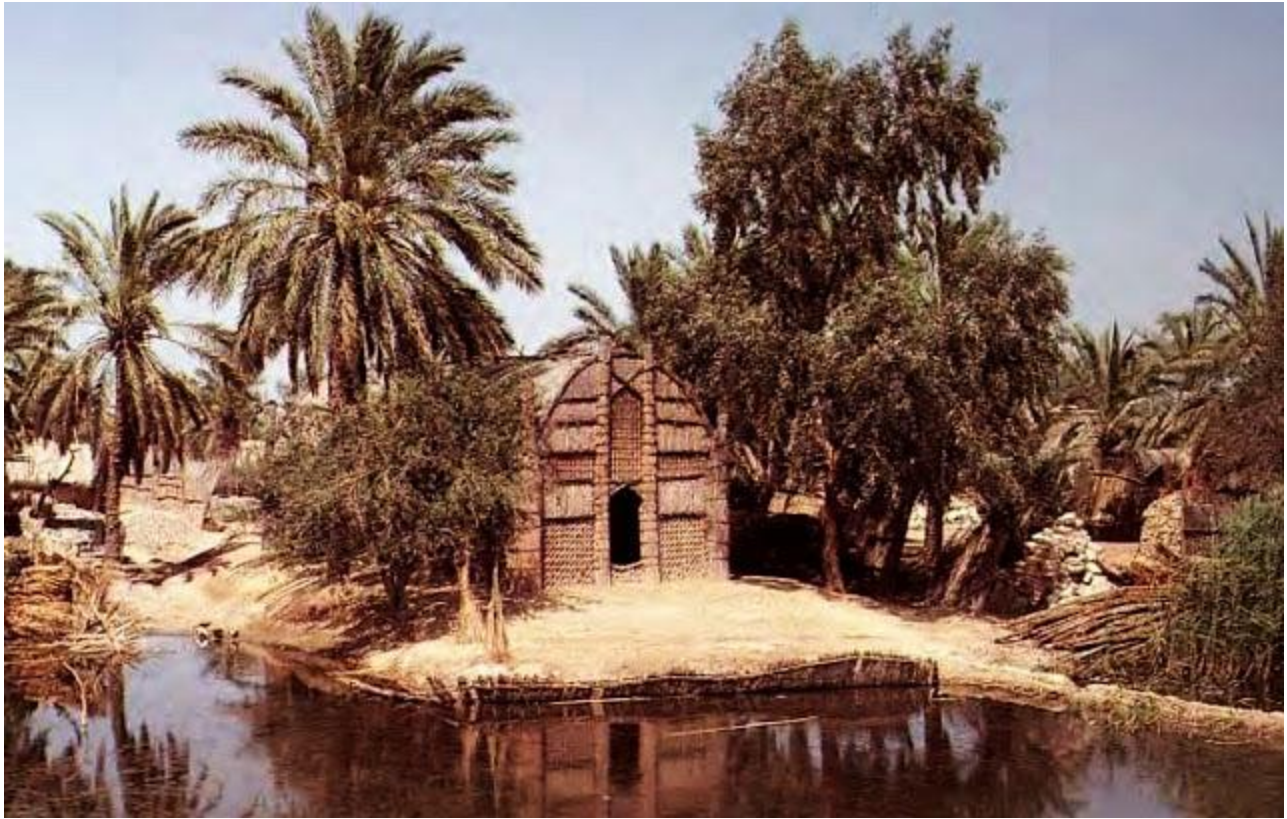
Mudhif Reception Hall

[https://commons.wikimedia.org/wiki/File:Mudhif_Reception_Hall_\(30943793762\).jpg](https://commons.wikimedia.org/wiki/File:Mudhif_Reception_Hall_(30943793762).jpg)



Detail of the front of a mudhif community building under construction.

https://www.army.mil/article/31452/soldiers_construct_traditional_meeting_hall_in_southern_iraq



A raba or family home based on mudhif construction.

https://www.brown.edu/Departments/Joukowsky_Institute/courses/ancientneareast/files/9444529.ppt



This picture of a mudhif on a Sumerian ceremonial trough dated ca. 3000 BCE, means that this architecture is at least 5000 years old. However, it is my guess that because its construction is similar to reed boats, since it uses bundled reeds for construction, it is much older and belongs to the late Neolithic period as does the reed boat remains that were found and mentioned earlier in this article.
(The British Museum, WA 120000, neg. 252077)

The origins of Sumerian civilization in Mesopotamia are still debated today, but archaeological evidence indicates that they established roughly a dozen city-states by the fourth millennium B.C...homes were constructed from bundled marsh reeds or mud bricks... (Andrews, "9 Things You May Not Know About the Ancient Sumerians")

The creative genius of these people emerged early - about 4500 B.C. - as they adapted to their harsh marshy environment. In a land barren of trees and without any stone quarries, they built astounding shelters of the only material available: fragile marsh reeds - bundling the reeds together with bulrush fiber, constructing frameworks of reed columns, roofing the structure with reed matting... (Bilkadi, Bitumen - A History)

"The homes of the affluent were built of sun-dried bricks while those of people of lesser means would have been constructed from reeds. It should be noted, however, that these buildings were still considered houses and were not the 'huts' so often imagined.

The historian Bertman describes the construction of these homes, writing: (Mark, "Daily Life In Ancient Mesopotamia,")

To build a simple house, tall marsh plants would be uprooted, gathered together, and tied into tight bundles. After holes were dug in the ground, the bundles of reeds would be inserted, one bundle per hole. After the holes were filled in and firmly packed, pairs of bundles that faced each other would be bent over and tied together at the top, forming an archway. The remaining bundles would then be joined together in similar fashion...reed mats would then be draped over the top to cover the roof, or hung from a wall opening to make a door (Bertman, Handbook to Life in Ancient Mesopotamia, p 285)



(LEFT) https://www.army.mil/article/37269/mudhif_houses_capture_spirit_of_iraqi_culture
(RIGHT) https://www.army.mil/article/31452/soldiers_construct_traditional_meeting_hall_in_southern_iraq

While the reed industry was the core of Sumerian basket weaving technology, it was not the only plant that was used. Date trees were valued for their wood and their leaves were also used for thatching:

Date trees were also an excellent source of leaves for house thatching, while the wood from the trunk was used for building. ("Ancient Mesopotamia," YL Social Studies 07, Canada)

ABOUT BRICK MAKING

To make up for the dearth of minerals and stones, they learned to bake the river clay and mud, the supply of which was practically inexhaustible...*[ED: clay was moved and manipulated with the aid of work baskets]* In lieu of the scarce building timber, they cut and dried the huge and plentiful marsh reeds, tied them into bundles or plaited them into mats *[ED: wove the mats]*, and with the help of mud-plastering fashioned them into huts and byres. *[ED: all of which required the skills of a basket weaver.]* Later the Sumerians invented the brick mold for shaping and baking the ubiquitous river clay and so had no more building-material problem. (Kramer, *The Sumerians*, pp. 3-4)



Sun-baked bricks.

https://commons.wikimedia.org/wiki/File:Mudbricks_in_Palestine_2011.jpg

Clay from the riverbanks would be mixed with straw for reinforcement and packed into small brick-shaped wooden molds, which would then be lifted off so the mud bricks could dry on the ground in the hot sun...Sun-dried brick was notoriously impermanent, especially as a consequence of yearly downpours. The alternative, oven-baked brick, was expensive, however, because of the fuel and skilled labor required for its manufacture. As a result, it tended to be used for the houses of kings and gods rather than the homes of ordinary people. (Bertman, *Handbook to Life in Ancient Mesopotamia*, p 285 - 286)



Fired clay brick stamped with the name of Amar-Sin, Ur III, from Eridu.

https://commons.wikimedia.org/wiki/File:Fired_clay_brick_stamped_with_the_name_of_Amar-Sin,_Ur_III,_from_Eridu,_currently_housed_in_the_British_Museum.jpg

Mass-Produced Bricks

To make up for a shortage of stones and timber for building houses and temples, the Sumerians created molds for making bricks out of clay, according to Kramer. While they weren't the first to use clay as a building material, "the innovation is the ability to produce bricks in large amounts, and put them together on a large scale,"... Their buildings might not have been as durable as stone ones, but they were able to build more of them, and create larger cities. (Kiger, "9 Ancient Sumerian Inventions That Changed the World")

ANOTHER MYTH ABOUT THE CREATION OF HUMANKIND THE CREATION OF THE PICKAX or THE SONG OF THE HOE

There is much we do not understand in the following Sumerian myth because a lot of the text has been lost, but the general idea is clear. The God Enki separated heaven and Earth so that humankind would have a hospitable environment to live in. Later He molded men, like making bricks from molds. He gave power to the pickax and the basket. Then he gave the pickax to the gods who in turn gave it to the people and who then built cities with the pickax and

baskets. The assumption is that work baskets were used to gather clay for the bricks to be molded and then used to maneuver finished bricks during construction.

The following is a translation by Samuel Noah Kramer from his book *Sumerian Mythology*, pp. 51-53.

Enlil, the lord whose decisions are unalterable,
Enlil, who brings up the seed of the land from the earth,
Took care to move away heaven from earth,
Took care to move away earth from heaven.
[ED: at the dawn of creation]
In order to make grow the creature
[ED: to provide a hospitable environment for humankind]
which came forth,
[ED: the creation of humankind]
In the "bond of heaven and Earth" He stretched out. . .
He brought the pickax into existence, the "day" came forth,
He introduced labor, decreed the fate,
upon the pickax and basket he directs the "power."

...
He set...the holy crown, upon his head,
The head of man he placed in the mold,
[ED: a further step in the creation of humankind -- men and women were made from molds just like Sumerian bricks were made from molds]

...
Upon his black-headed people
[ED: the Sumerians he created]
He looked steadfastly.
The Anunnaki
[ED: the greater gods]
who stood about Him,
He placed the pickax as a gift in their hands,
They soothe Enlil with prayer,
They give the pickax to the black-headed people to hold.

...
The pickax and the basket build cities.



An Ethiopian farmer at work on his land with a traditional pickax (hoe)..

https://commons.wikimedia.org/wiki/File:Ethiopian_farmer_at_work_on_his_land.jpg

There was a particular word for the essential heavy-duty baskets that were used to haul clay and bricks. These baskets were probably not elegant but quite rugged and durable. Here is a listing and definition of that word from the ePSD2 dictionary of ancient languages in Mesopotamia. (ePSD2, Oracc Museum)

dupsik [BASKET] N (307x) Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian wr. dupsik; ešdupsik; gidupsik; zub-sig3; tu-up-ši-ikdupsik; gidupsikdu-su; gidupsikdu-us2-su "a basket (for carrying earth and bricks)"

ABOUT TRADE

Since Sumer was lacking many normal resources, the Sumerians engaged in trade. They made extensive use of copper for their plows, for example, which made a significant difference in their ability to grow crops. But in order to get this copper, they initially needed large reed boats. Apparently, the quality of their baskets was good enough that they could export these even though most societies made their own baskets. This suggests that the Sumerian baskets had a special quality that made them especially useful.

In addition to maritime trade, several overland routes were established. These caravans used pack animals such as donkeys probably with rugged baskets or woven sacks, slung over their backs, to carry the items for trade.

Mesopotamia trade grew organically from the crossroads nature of the civilizations that dwelt between the rivers and the fertility of the land. Because of irrigation, southern Mesopotamia was rich in agricultural products, including a variety of fruits and vegetables, nuts, dairy, fish and meat from animals both wild and domestic. Other than food items, Mesopotamia was rich in mud, clay and reeds out of which they built their cities. For most other essential goods, such as metal ores and timber, Mesopotamia needed trade.

Craftsmen in Mesopotamia created a variety of trade goods from fine textiles to sturdy, nearly mass-produced pottery made in temple workshops to leather goods, jewelry, **basketry**, devotional figurines and ivory carvings among others.

...

A busy sea route went through the Persian Gulf across the Arabian Sea to the Indus valley in what is today's northern India and Pakistan. By the 3rd millennium, Mesopotamia trade went in all directions.

By the time of the Assyrian empire, Mesopotamia was trading exporting grains, cooking oil, pottery, leather goods, **baskets**, textiles and jewelry and importing Egyptian gold, Indian ivory and pearls, Anatolian silver, Arabian copper and Persian tin. Trade was always vital to resource-poor Mesopotamia.

Long-distance trade was carried out by caravans using donkeys as pack animals. Donkeys could carry about 150 pounds and travel on the plains and into the mountains, places where wheeled carts couldn't go. (Rank, "Mesopotamia Trade: Merchants and Traders")



Donkey with traditional baskets in Spain.

https://commons.wikimedia.org/wiki/File:Donkey_panniers.jpg

ABOUT COPPER AND BRONZE

Copper was the first metal to be widely utilized and the Sumerians, even though they had to import it, were the first to understand how to smelt it at high temperatures. Their skill with smelting copper ore led to the discovery of bronze which was an alloy of copper and tin (or arsenic) and was much harder than copper by itself. Yet while copper and bronze may have replaced some basket items, basketry still played a major role. For example, copper ore was often imported via reed boats, boats built with basket technology.

Since their homeland was largely devoid of timber, stone and minerals, the Sumerians were forced to create one of history's earliest trade networks over both land and sea. Their most important commercial partner may have been the Island Of Dilmun (present day Bahrain), which held a monopoly on the copper trade. (Andrews, "9 Things You May Not Know About the Ancient Sumerians")

Virtually all the ore used by the ancients was handpicked with only the most worthwhile material being taken. Originally it was probably smelted by the Sumerians in shallow pits using charcoal as the fuel. How they first derived the necessary draught to raise the temperature sufficiently to melt the ore is still a matter of speculation, but it may have been done by banking over the furnace with clay and leaving an opening directed towards the prevailing wind. Bellows were certainly known by about 2500 B.C. and some form of bellows must have been employed still earlier in order to account for the more ancient bronzes. Not until 2000 B.C. or later did these improvements reach Egypt, where hieroglyphs of that period show air being blown into the furnace through a straight tube. The bellows type reached Egypt a little later. ("Early Smelting Practice," Copper.org)

Around 3500 BC the first signs of bronze usage by the ancient Sumerians started to appear in the Tigris Euphrates valley in Western Asia. It is thought that bronze properly appeared in the region around 3000 BC. ("History of Bronze," makingmetals.com)

ABOUT BASKET BOATS

Two very different kinds of boats were based on basket weaving technology. First were the sea-going reed boats that were capable of carrying tons of cargo as described earlier in this article. Second were the much smaller round coracle boats, also known as basket boats because their structure was based on a basket design. Coracles were generally used on the rivers. Many historians believe that coracles were invented early and may have existed in the Neolithic era.



(LEFT) https://commons.wikimedia.org/wiki/File:Hogenakkal_Coracle.jpg
 (RIGHT) https://commons.wikimedia.org/wiki/File:Kuphar_Quffa_Baghdad_1914.jpg

According to Brighthubengineering.com, the Coracle is known as one of the world's oldest boats...The Coracle may have predated the written word. Some believe that anglers used these watercraft during Prehistoric Times. *[ED: as they were excellent fishing vessels]* ("The Coracle History," Roundabout Watercrafts)

ABOUT THE CRAFT OF BASKET WEAVING

The word for basket maker was an older word, a word that was Pre-Sumerian, indicating that basket weaving had reached a high point of development before the Sumerians arrived in Mesopotamia. The Sumerian expert, Samuel Kramer, wrote that the word for basketmaker is a pre-Sumerian word as were some others, such as the words for farmer, weaver and leatherworker.

Benno Landsberger of the University of Ankara and a specialist in cuneiform research, concluded that these words "must therefore belong to the language spoken by...pre-Sumerian people. It therefore follows that the basic agricultural techniques and industrial skills were first introduced in Sumer not by the Sumerians but by their nameless predecessors. Landsberger called this people Proto-Euphrateans...which is...useful from the linguistic point of view."

"In archeology, the Proto-Euphrateans are known as the Ubaid people."
 (Kramer, The Sumerians, p. 41)

While the term 'basket weaver' was used in the Sumerian language, it referred to a variety of weaving skills. Specifically, a basket weaver was defined as "a reed craftman, basket and mat weaver" (Foxvog, Elementary Sumerian Glossary)

**PLEASE SEE THE APPENDIX
AT THE BOTTOM OF THIS ARTICLE
for a list of over 100 ancient Mesopotamian words
about basket weaving,
baskets, woven mats, reed craftsmanship,
reed constructions and weaving with palm leaves**

THE MYTH OF:

Inanna and Enki:

The Transfer of the Arts of Civilization from Eridu to Uruk

The 'craft of basket weaving' was highly respected and considered to be one of the pillars of Sumerian culture. It was included in the approx. 100 MEs, a list of elements that made up Sumerian culture, an essential list decreed by the gods, which in this myth were passed over to Inanna and human culture.

In this myth basket weaving is mentioned, specifically, a number of times emphasizing its importance.

Inanna, queen of heaven, and tutelary goddess of Erech, is anxious to increase the welfare and prosperity of her city, to make it the center of Sumerian civilization, and thus to exalt her own name and fame.

She therefore decides to go to Eridu, the ancient and hoary seat of Sumerian culture where Enki, the Lord of Wisdom, who "knows the very heart of the gods," dwells in his watery abyss, the Abzu.

For Enki has under his charge all the divine decrees that are fundamental to civilization. And if she can obtain them, by fair means or foul, and bring them to her beloved city Erech, its glory and her own will indeed be unsurpassed.

[ED: After feasting the drunken Enki willing agrees to turn over the decrees to Inanna.]

"O name of my power, O name of my power,
To the pure Inanna, my daughter, I shall present
The exalted scepter, staffs, the exalted shrine, shepherdship, kingship."

He thus presents, several at a time, over one hundred divine decrees which are the basis of the culture pattern of Sumerian civilization.

Among these divine decrees presented by Enki to Inanna are those referring to lordship, godship, the exalted and enduring crown, the throne of kingship, ...

heroship and power ...rejoicing of the heart...the craft of the carpenter, metal worker, scribe, smith, leather worker, mason, and **basket weaver...**

"O name of my power, O name of my power,
To the bright Inanna, my daughter, I shall present . . .
The arts of woodworking, metalworking, writing, toolmaking,
leatherworking...building, **basketweaving.**"
Pure Inanna took them.

Inanna is only too happy to accept the gifts offered her by the drunken Enki. She takes them, loads them on her "boat of heaven," and makes off for Erech with her precious cargo. (Kramer, Sumerian Mythology, pp. 64-67.)

CONCLUSION

Civilization was able to gain a foothold partly because a fully developed basket weaving technology was available from the earliest beginnings of the Sumerian cities. Much of this sophisticated technology had been developed thousands of years earlier in the Neolithic era.

In combination with bitumen, a wide variety of objects were created. This technology was crucial at the start and continued to be important as the civilizations matured. So while copper, bronze, and wood items plus bricks and mass-produced pottery may have replaced some basket products, basket weaving technology continued to play a major role. Grass houses, reed and coracle boats, work baskets for hauling clay and bricks and crops, mats, bundled reeds with bitumen as foundations for irrigation control, plus dozens of personal items like carry-baskets, boxes, and chests, were a continual and essential part of the culture.

AFTERWORD

THE IMPORTANCE OF BASKET WEAVING TECHNOLOGY IN ANCIENT EGYPT



In both Egypt and Mesopotamia the basket had mythical importance.

(LEFT) The Egyptian god Heh (or Huh) kneeling on a basket

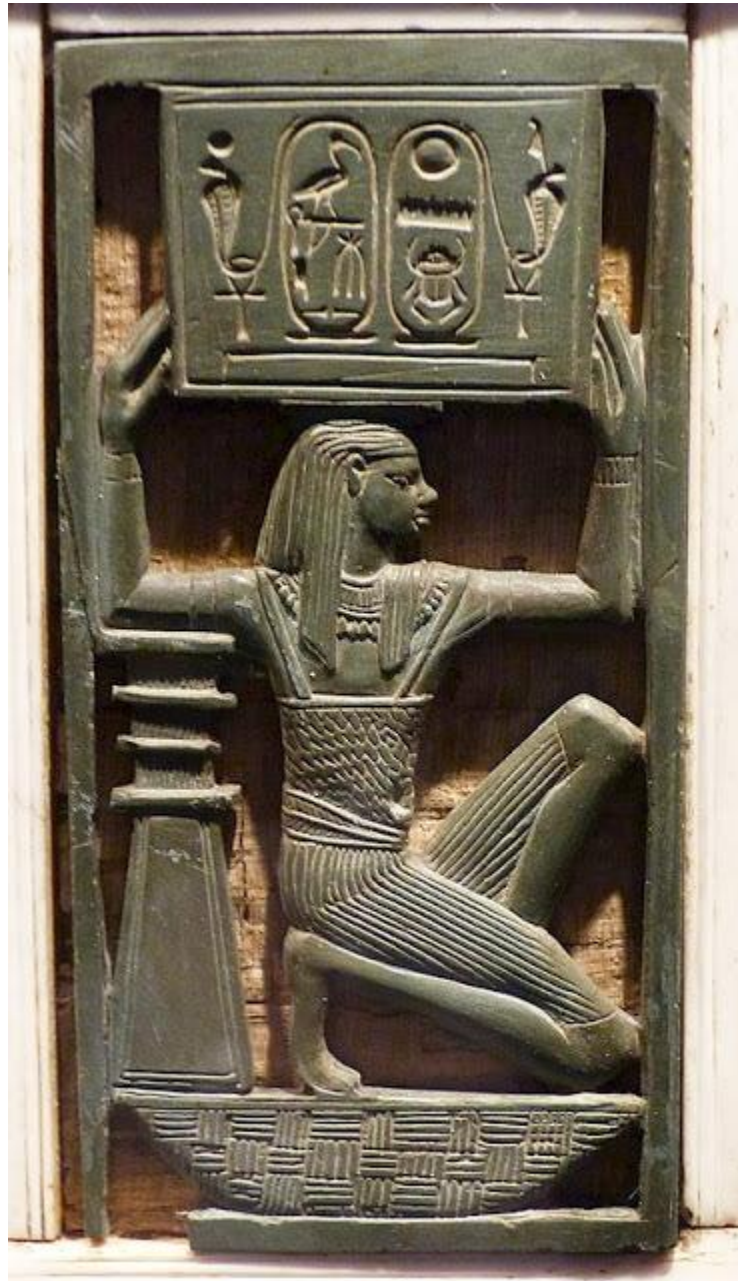
https://commons.wikimedia.org/wiki/File:Egyptian_-_Kneeling_Heh_on_a_Basket_-_Walters_48425_-_Back.jpg

(RIGHT) King Ashurbanipal of Mesopotamia as the high priest performing the basket-bearer ritual. The kings of Mesopotamia were known as priest-kings.

https://commons.wikimedia.org/wiki/File:Assurbanipal_als_hogepriester.jpg

The god Heh or Huh was frequently depicted with a basket and one knee raised as in this picture of "Kneeling Heh on a Basket." He also often holds a palm branch in each hand. (Remler, Egyptian Mythology, A to Z)

"Heh was one of the oldest Egyptian gods in ancient Egyptian history, the deification of eternity in the Ogdoad. The name Huh also spelled as Heh, Hah, Hauh, Huah, or Hahuh, whose name means endlessness. He was the god of infinity and time, the god of long life and eternity." ("Egyptian Gods: Huh" egyptian-gods.org)



"Relief of god Heh holding the cartouche of Thutmoses III,
New Kingdom, 18th dynasty (1479-1425 BC)"

https://commons.wikimedia.org/wiki/File:LSR_Pharao_-_Thutmoses_Kartusche.jpg



Showing the use of reed boats in both Mesopotamia and Egypt.

(TOP) Mesopotamian reed boats circa 700 BCE.

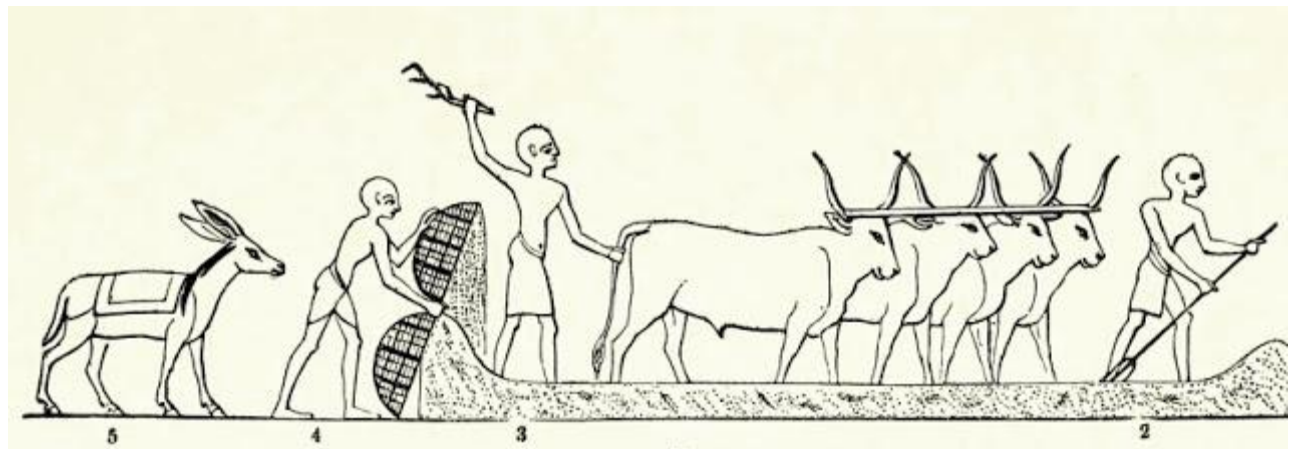
Picture from *A History of Babylon*..

(King, Leonard. *A History of Babylon*. London, Chatto and Windus, 1915, p. 201.)

(BOTTOM) Egyptian reed boat with baskets on the boat, circa 700 BCE.

https://commons.wikimedia.org/wiki/File:Boating,_Luxor,_tomb_of_Mentuemhet,_Third_Intermediate_Period_to_Late_Period,_Dynasties_25-26,_c._690-664_BC,_limestone_pigment_-_Oriental_Institute_Museum,_University_of_Chicago_-_DSC07798.JPG

FROM THE FARM TO THE TABLE ANCIENT EGYPTIANS USED AND DEPENDED ON BASKETS



No. 429.

The tritura.

- Fig. 1. The steward, or the owner of the land.
 2. throws the ears of wheat into the centre that the oxen may pass over them and tread out the grain.
 3. The driver.
 4. brings the wheat to the threshing floor, in baskets carried on asses.
 The oxen are yoked together that they may walk round regularly.

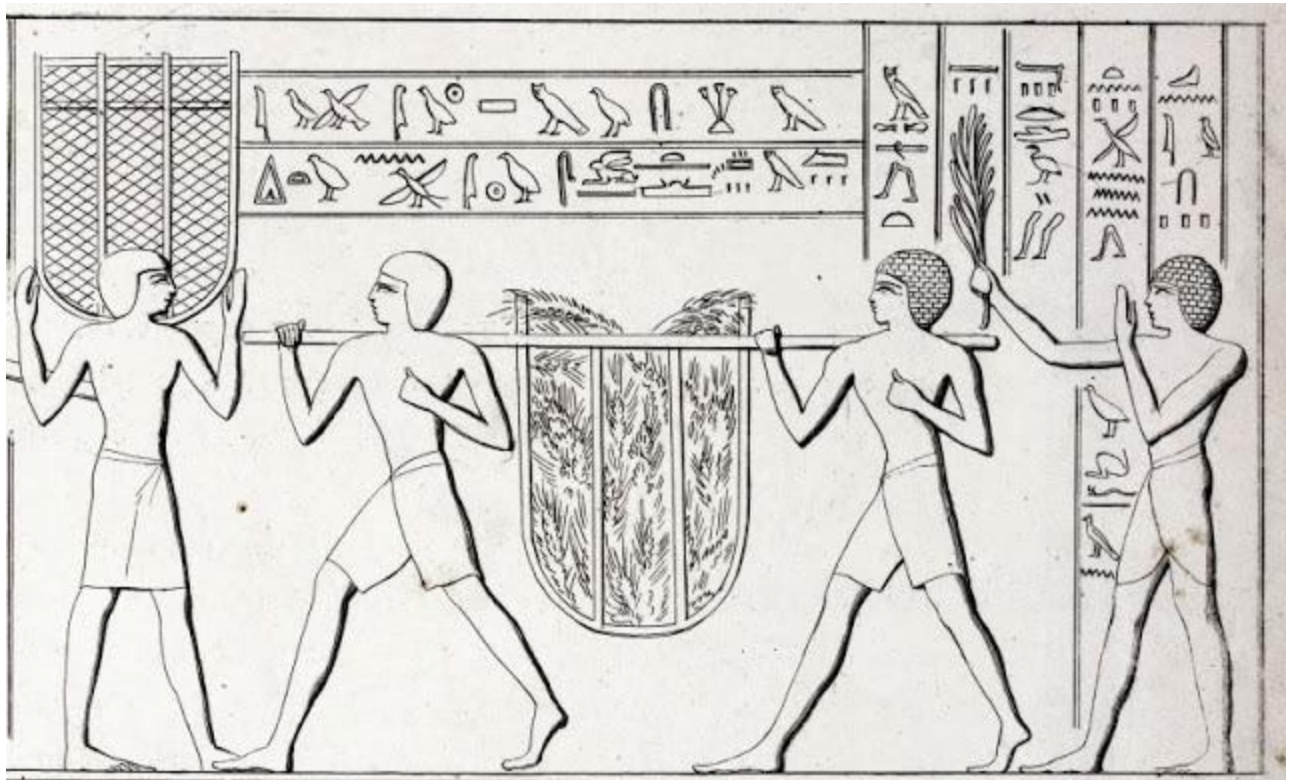
[https://commons.wikimedia.org/wiki/File:A_second_series_of_the_Manners_and_customs_of_the_ancient_Egyptians_\(Page_87\)_BHL21584712.jpg](https://commons.wikimedia.org/wiki/File:A_second_series_of_the_Manners_and_customs_of_the_ancient_Egyptians_(Page_87)_BHL21584712.jpg)



https://commons.wikimedia.org/wiki/File:Maler_der_Grabkammer_des_Nacht_002.jpg



https://commons.wikimedia.org/wiki/File:Maler_der_Grabkammer_des_Panehsi_001.jpg

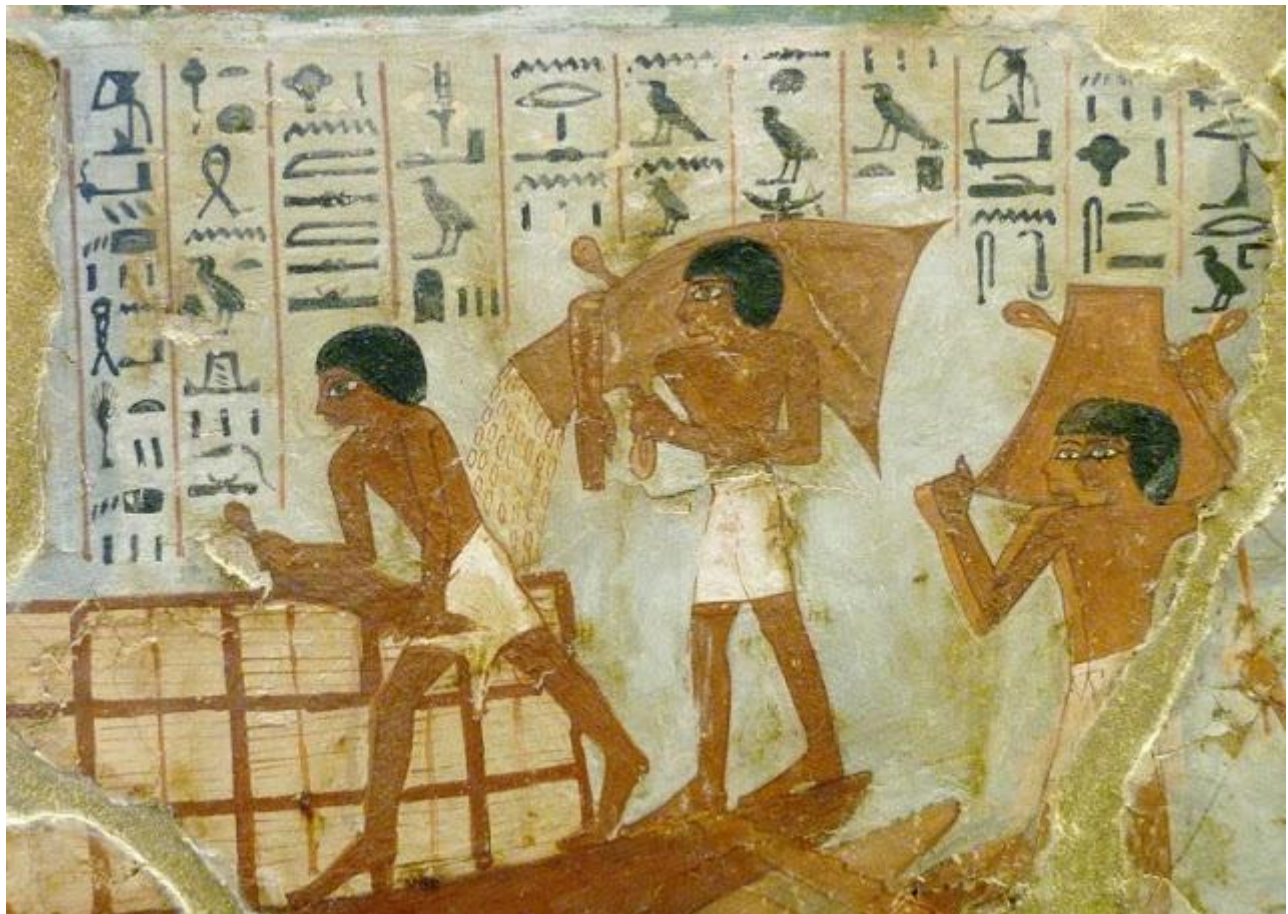


[https://commons.wikimedia.org/wiki/File:Mietitura_delle_spighe-ricolta_e_battitura_delle_medesime_\(NYPL_b14291206-425523\).jpg](https://commons.wikimedia.org/wiki/File:Mietitura_delle_spighe-ricolta_e_battitura_delle_medesime_(NYPL_b14291206-425523).jpg)



Both the Egyptians and Mesopotamians used woven sacks.
This picture of a person carrying a sack is from the city of Ur in Mesopotamia.

https://commons.wikimedia.org/wiki/File:Standard_of_Ur_-_Peace_Panel_-_Sumer.jpg



Egyptian workers carrying sacks.

https://commons.wikimedia.org/wiki/File:Tombe_d%27Oumsou_1b.jpg



Ancient Egyptian model of a granary with workers holding sacks of grain, circa 2000 BCE.
https://commons.wikimedia.org/wiki/File:Model_of_a_Granary_with_Scribes_MET_20.3.11_EGDP014047.jpg



Offer bearers carrying baskets circa 2400 BCE.
https://commons.wikimedia.org/wiki/File:V_dinastia,_mastaba_di_ti,_2400_ac_ca._10.JPG

ENDNOTES

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APPENDIX

Over 100 Words Altogether About Basket Weaving, Baskets, Woven Mats, Reed Craftmanship, Reed Constructions And Weaving With Palm Leaves

As anthropologists know, multiple words for certain practices or materials or objects indicate that these were important to and prevalent in the culture.

THESE DEFINITIONS COPIED FROM:

ePSD2 sux Summaries:

A dictionary of words in ancient Mesopotamian languages.

Oracc Museum, University of Pennsylvania.

<<http://oracc.museum.upenn.edu/epsd2/cbd/sux/summaries.html>>

WORDS FOR CRAFTSMEN AND WORKERS

ad.KID [WEAVER] N (864x) Early Dynastic IIIa, Early Dynastic IIIb, Ebla, Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian wr. ad-KID; ad-KIDzabar "basket weaver; reed worker"

nam.ad.KID [BASKET-WEAVING] N (4x) Old Babylonian wr. nam-ad-KID "the craft of the basket-weaver"

nitagtag [BASKET MAKER] N (1x) Neo-Assyrian wr. lu2ni2-tag-tag "basket maker"

kuštağa [MAT WEAVER] N (2x) Neo-Assyrian, Neo-Babylonian wr. lu2kuš-tag-ga "mat weaver"

ninnitaga [RUSH WEAVER] N (1x) Neo-Assyrian wr. lu2ninni5-tag-ga "rush weaver"

tugdu [FELTER] N (507x) Early Dynastic IIIa, Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian wr. tug2-du8 "felter; rope maker"

mangagagaz [WORKER] N (4x) Ur III wr. KA-gaz; mangaga-gaz "worker of palm fibers"

dupsik gur [WORK] V/t (0x) wr. dupsik gur17 "to do corvee work (lit. to carry the basket)"

BASKET RELATED WORDS

bandu [HOPPER] N (0x) wr. ba-an-du5 "hopper, sowing basket"

bandudu [BASKET] N (139x) Early Dynastic IIIb, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian wr. ba-an-du5; ba-an-du8-du8; giba-an-du8-du8; ba-an-du8; giba-an-du; giba-an-du8; giba-an-du5; urudba-an-du8-du8; ba-an-du8-du8zabar; giba-an-du-du8; giba-an-du8-zu; ešba-an-du8-du8; ba-an-du-du; ba-an-du-tu; ešba-an-du8 "seeding basket of a plow; bucket"

bisa [BASKET] N (1653x) Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian, Hellenistic, unknown wr. bisa; gibisa; ešbisa; bisa3; bisa2; bisa2pi-sa-an-na; pi-sa-anbisa; pi-

sa-anbisa2; dugbisa2pi-sa-an; imbisa2; ešbisa3; ešbisa3pi-sa-an; eš pi-sa-anbisa3; bisa-bisa; bisa2-na; dugbisa2 "basket; frame; box; downspout"

bisahal [BASKET] N (1x) Old Babylonian wr. gibisa-al "a basket"

bisanindaar [BASKET] N (1x) Old Babylonian wr. bisa-ninda-ar "bread basket"

bisasuh [BASKET] N (2x) Old Babylonian wr. gibisa-su4; bisa-su4 "a basket"

dupsik [BASKET] N (307x) Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian wr. dupsik; ešdupsik; gidupsik; zub-sig3; tu-up-ši-ikdupsik; gidupsikdu-su; gidupsikdu-us2-su "a basket (for carrying earth and bricks)"

EN [-BASKET] AJ (112x) Early Dynastic IIIa, Lagash II, Ur III, Old Babylonian wr. EN "a qualification of reed baskets and reed mats"

gabil [BASKET] N (59x) Early Dynastic IIIb, Lagash II, Ur III, Old Babylonian, Neo-Assyrian wr. gab2-il2; gab2; gigab2-il2 "a basket"

gi.gur.DU [BASKET] N (2x) Old Babylonian wr. gi-gur-DU "basket"

gigurda [BASKET] N (13x) Old Babylonian, Neo-Assyrian, Neo-Babylonian wr. gi-gur-da "a basket"

gigurzidga [BASKET] N (2x) Ur III wr. gi-gur-zid2-ga6 "basket for carrying flour"

gihan [BASKET] N (33x) Ur III, Old Babylonian, Neo-Babylonian wr. gi-a-an "a basket for wool"

gipad [BASKET] N (0x) wr. gi-pad "a basket for dates"

gisab [BASKET] N (1x) Old Babylonian wr. gi-sab "basket"

gur [BASKET] N (5x) Old Babylonian, Middle Assyrian, Neo-Assyrian wr. gur; kur4; ešgur "a basket"

gurdub [BASKET] N (882x) Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian wr. gurdub; gigur-dub; gurdub2; gigurdub2; gur-dub; gigurdub; ešgurdub "a basket"

gurub [BASKET] N (2x) Old Babylonian wr. gu2-ru-ba; gu2-ru-ub; gu-ru-ba; gu-ru-ub "a basket"

iri du [PROVIDE WITH BASE] V/t (8x) Ur III, Old Babylonian wr. iri3 du3; iri3 du "to provide (a basket) with a base"

irlam [BASKET] N (349x) Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian wr. ir3-lam; gigi7-lam; KIŠ-lam; gi-lam "a basket"

hal [BASKET] N (296x) Early Dynastic IIIa, Old Akkadian, Lagash II, Ur III, Old Babylonian wr. gial; al; a-al "a basket"

halhallum [BASKET] N (1x) Ur III wr. al-al-lum "a basket"

il [BASKET] N (2x) Middle Babylonian wr. il2; ešil2 "a basket"

kaskal [BASKET] N (480x) Ur III wr. gikaskal "travel basket"

kaskal ninda si [BASKET] N (0x) wr. gikaskal ninda si "bread basket"

kigub [STATION] N (141x) Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Hellenistic, unknown wr. ki-gub; ki-gub-ba; ki-gubzabar; eški-gub "station, position; stand (for a basket)"

kita [BASKET] N (11x) Old Babylonian, Middle Babylonian, Neo-Babylonian wr. eškid-da; eški-ta; eša2-da; kid-da "basket"

lumasabil [CARRIER] N (0x) wr. lu2-ma-sa2-il2 "a basket carrier"

masab [BASKET] N (256x) Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Babylonian, Hellenistic wr. gima-sa2-ab; ma-sa2-ab; ma-sa2; ma-sab; gima-sab; gina-sa2-ab; ma-sa2-abkug-sig17; ma-sa2-abzabar; ma-sa2-abkug-babbar; urudma-sa2-ab "basket"

mudla [BASKET] N (3x) Old Babylonian, Middle Babylonian wr. ešmudla; mu-ud-lamudla; mudla "basket"

nashapu [BASKET] N (2x) Neo-Assyrian, Neo-Babylonian wr. na-as-a-pu "basket"

pad [BASKET] N (24x) Ur III, Neo-Assyrian, Neo-Babylonian wr. gipad; pad; gipad3; pad3; gipad3-da "a basket"

sašu [TURBAN] N (121x) Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian wr. tug2sašu; sašu; sa-šu2; zag-šu2; tug2šu2-sa; sa-šu; sa-šu4; sa-šusašu "cap, turban; cover (of basket or pot)"

sigda [BASKET] N (70x) Ur III wr. gisi-ig-da; ešši-ig; gisi-ig; si-ig-da; ešši-ig-da "a basket"

šu [BASKET] N (5x) Early Dynastic IIIb, Ur III wr. eššu4 "basket"

šuguru [~DATES] N (64x) Old Akkadian, Lagash II, Ur III, Old Babylonian wr. šu-guru5; šu-gur5-ru "container for fruit, basket"

MORE THAN 60 WORDS RELATED TO WOVEN REED CONSTRUCTIONS

al [FENCING] N (1x) Neo-Babylonian wr. gial "reed fencing"

al.PI.na [REED FENCE] N (1x) Old Babylonian wr. gial-PI-na "reed fence"

asal [~ARCHITECTURE] N (12x) Ur III, Old Babylonian wr. a-sal; eša-sal4; a-sa-al; a-sal4; a-sal4zabar; na-sal-am3 "reed column (at door posts)"

azad [SHELTER] N (7x) Old Babylonian, Middle Babylonian, Neo-Assyrian wr. a-zar; giazad(A.LAGAB×AL.ŠU2); giu2azad(A.LAGAB×KUL.ŠU2.MA2.A); u2azad(A.LAGAB×AL.ŠU2.A); u2azad(LAGAB×AL.ŠU2); azad2; azad(A.LAGAB×AL.ŠU2); azad(U2.A.LAGAB×AL); u2-azad(A.LAGAB×AL.X) "reed shelter"

bandul [MAT] N (4x) Neo-Babylonian wr. giba-an-dul "a reed mat"

barhuda [TOOL] N (5x) Old Babylonian wr. bar-u-da "a tool; a reed cutter"

dimuš [SHELTER] N (7x) Neo-Assyrian wr. dimuš "reed shelter, nest; reed stalk"

dirig [RAFT] N (5x) Old Babylonian, Neo-Babylonian wr. dirig; gidirig; a-dirig "reed raft"

DUB.NAGAR.UM [OBJECT] N (0x) wr. giDUB-NAGAR-UM "a reed object"

e gisigak [REED HUT] N (8x) Old Babylonian, Middle Babylonian wr. e2 gi-sig "reed hut"

ešgi [SHRINE] N (0x) wr. eš3-gi "a reed shrine"

garadin [BUNDLE] N (71x) Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Persian wr. garadin; garadin3; garadin6; gigaradin4; garadin7; garadin9; garadin10; garadin2; garadin8; garadin(GAD&GAD.GAR&GAR); garadin(TAB.GAR.ŠE); garadin(ŠE.EŠ2.PI.GAR); gigaradin; gi ka-ra-dingaradin5; garadin4; gigaradin5 "bundle (of reeds), stack of sheaves"

gi du [ERECT A FENCE] V/t (51x) Ur III, Old Babylonian wr. gi du3 "to erect a reed fence; to make reed compartments in a boat"

gi gul [PROCESS REEDS] V/t (1x) Old Babylonian wr. gi gul; gi gu-ul-gu-ul "to process reeds"

gi.sa.du.DI.a [REED EFFIGY] N (2x) Neo-Assyrian wr. gi-sa-du-DI-a "reed effigy"

giil [REED-CARRIER] N (23x) Ur III wr. gi-il2 "reed carrier"

gidimdim [REED OBJECT] N (2x) Neo-Assyrian, Neo-Babylonian wr. gi-dim-dim "reed object"

gidu [FENCE] N (44x) Early Dynastic IIIa, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian wr. gi-du3; gi-du3-a; gi4-du3 "reed fence"

gilim [ROPE] N (151x) Old Akkadian, Lagash II, Ur III, Old Babylonian, Neo-Assyrian, Neo-Babylonian, Persian, unknown wr. giligim; gilim; giligim-sa; kilib "a rope of twined reeds; reed post"

girgi [REED STRIP] N (4x) Old Babylonian wr. gir-gi4; gir-gi "reed strip"

girila [REED OBJECT] N (2x) Neo-Assyrian wr. gigiri3-la2 "reed object"

gisal [SCREEN] N (98x) Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian, Hellenistic, unknown wr. gi-sal; gi-sa; ešgi-sal "reed screen; eaves"

gisal gul [PROCESS REEDS] V/t (0x) wr. gi-sa gul "to process reeds"

gisig [FENCE] N (38x) Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian, unknown wr. gi-sig; gi-sig7 "a reed fence; a reed hut"

gišid [REED] N (190x) Old Akkadian, Ur III wr. gi-šid; ga-šid "fully matured reed"

gišu [REED COIL] N (3x) Neo-Assyrian wr. gi-šu2-a; gi-šu2 "reed coil"

gizukeš [REED BUNDLE] N (1x) Neo-Assyrian wr. gi-zu2-keš2 "reed bundle"

gu la [BUNDLE] V/t (1x) Early Dynastic IIIa wr. gu la2 "to bundle (reeds or grass)"

gud [NEST] N (100x) Old Babylonian, Middle Babylonian, Neo-Assyrian, Hellenistic, unknown wr. gud3; gigud3; gud3gu-ud; gud; u2gud3 "nest, reed nest, shelter; coil of bird's nest"

guhšu [ALTAR] N (18x) Old Babylonian, Neo-Assyrian, Neo-Babylonian, Persian wr. gušu2; gigum2-gum2-šu2; gušu; gigušu; gum2-šu2; gigu-gu-un; gigu-gu-un-šu2; gigu-un-šu2; gigušu2 "a reed altar; (a part of) a container"

gula [SHEAF] N (167x) Early Dynastic IIIa, Early Dynastic IIIb, Old Akkadian, Ur III wr. gu-la2 "sheaf of reeds"

gurna [CONTAINER] N (54x) Ur III wr. gigur-na; gur-na "a reed container"

guru [BUNDLE] N (20x) Ur III, Middle Babylonian, Neo-Assyrian wr. giguru5; guru5; giguru5-uš "a reed bundle"

hurda [REED MAT] N (5x) Ur III, Old Babylonian, Middle Babylonian wr. u-ur-da; u-ur2-da; ur-da; ur-du; giur-da; giur-du "a reed mat; mat door"

KA.gir [MAT] N (28x) Early Dynastic IIIb, Ur III wr. KA-gir; KA-gir14-ra; giKA-gir; KA-gir3; KA-gir4 "a reed mat"

kazir [OBJECT] N (3x) Ur III wr. ka-zi-ir "qualification of a mat or reed object"

kid [MAT] N (803x) Early Dynastic IIIa, Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian wr. gikid; kid; kid2 "a reed mat or woven object"

kidmah [MAT] N (5x) Ur III, Old Babylonian wr. gikid-ma "a reed mat"

kidmahhal [MAT] N (1x) Old Babylonian wr. kid-ma-al "a mat"

kidmamah [MAT] N (1x) Old Babylonian wr. kid-ma2-ma; gikid-ma2-ma "a reed mat"

kidmaniina [MAT] N (0x) wr. gikid-ma2-niin-a "a reed mat; boat-cover"

kidmašagak [MAT] N (2x) Old Babylonian wr. gikid-ma2-šag4-ga "a reed mat"

kidmašua [MAT] N (144x) Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian wr. muru(KID.ŠU2.MA2); gimuru(KID.ŠU2.MA2); gikid-ma2-šu2-a; KID-MA2-U-A; giKID-MA2-U-A; gikid-ma2-šu2; kid-ma2-šu2-a; giKID-U-MA2; KID-U-MA2; KID-U-MA2-A; KID-ŠU2-MA2-GI; giKID-ŠU2-MA2-A; kid-ma2-šu2 "a reed mat; boat-cover; rushes, thicket; boat cover"

lugize [REED-CUTTER] N (3x) Ur III, Old Babylonian wr. lu2-gi-ze "reed-cutter"

madala [BUNDLE] N (39x) Ur III, Old Babylonian, Neo-Assyrian, Neo-Babylonian wr. ma2-da-la2; ešma2-da-la2; gima2-da-la2; ma2-da-lum; urudma2-da-lum; ešda-la2 "bundle of reeds, reed-bundle; raft; a metal object"

mahatum [SIEVE] N (1x) Ur III wr. gima-a-tum "a type of reed sieve"

mansimšual [SIEVE] N (0x) wr. ma-an-sim-šu-al2 "a reed sieve"

murū [MAT] N (14x) Old Babylonian, Middle Babylonian, Hellenistic wr. gimuru(KID.MA); gimuru(KID.ŠU2.MA2) "a reed mat used as a cover"

nimah [MAT] N (0x) wr. ni2-ma "a reed mat"

nisiga [MATTING] N (12x) Ur III, Old Babylonian, Neo-Babylonian wr. gini2-si-ga; ni2-si-ga; gini2-sig-ga; gini2-sig "matting; a part of a reed-rope door; a reed fence"

piri [LION] N (348x) Early Dynastic IIIa, Early Dynastic IIIb, Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian, Persian, Hellenistic, Uncertain, unknown wr. piri; piri-piri; piri3; bi2-ri-i3; ešpiri; pi-ri-a2; gipiri; tug2piri-piri; piri2 "lion; lion figurine; bull, wild bull; reed knot"

sa [BUNDLE] N (8636x) Early Dynastic IIIa, Early Dynastic IIIb, Old Akkadian, Ur III, Old Babylonian, Middle Babylonian wr. sa; gisa; sa2 "reed-bundle"

salillan [REED FENCE] N (4x) Neo-Assyrian, Neo-Babylonian wr. gisa-lillan "reed fence"

saha [UNMNG] N (10x) Ur III wr. sa-a "describing a reed object"

šakkaru [TOOL] N (1x) Neo-Assyrian wr. na4šak-ka-ru-u "a stone tool of the reed worker"

šerrum [MAT] N (291x) Ur III wr. šer7-ru-um; šer7-um; gišer7-ru-um; gišer7-um; šer7; šer7-ru; gišer7-ru "a reed mat"

šertab [FENCE] N (11x) Early Dynastic IIIa, Old Babylonian, Neo-Assyrian wr. še-er-tab; sir2-dib "a reed fence; frame"

šeš [OBJECT] N (1x) Old Babylonian wr. eššeš "a metal or reed object"

šutug [REED-HUT] N (22x) Old Akkadian, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian, Uncertain wr. gišutug; šutug; šutug2; gišutugšu-tuk; gišutug2; eššutug "reed-hut, reed shelter"

ududu [REED-BUNDLE] N (6x) Early Dynastic IIIb, Old Babylonian, Neo-Assyrian, Neo-Babylonian wr. u2-du3; giu2-du3-du3; ešu2-du3-du3 "reed bundle"

ugra [REED-BUNDLE] N (7x) Middle Assyrian, Neo-Assyrian wr. ugra; giugra "bundle of reeds, reed-bundle"

um [ROPE] N (13x) Old Akkadian, Old Babylonian, Middle Babylonian wr. um; gium "reed rope"

ušera [REED-BUNDLE] N (7x) Middle Assyrian, Neo-Assyrian, Neo-Babylonian wr. ušera "bundle of reeds, reed-bundle"

OTHER WOVEN-FIBER RELATED WORDS

kad [TIE] V/t (53x) Early Dynastic IIIa, Early Dynastic IIIb, Old Akkadian, Ur III, Old Babylonian, Middle Assyrian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian wr. kad4; kad5; kara2; kad8; gar3; ka-ad; kad3; kad3-kad3; kad4-da; kad4-kad4; kad6; qatkad5 "to tie, gather; to itch, scratch; to weave a mat"

gilim [ROPE] N (151x) Old Akkadian, Lagash II, Ur III, Old Babylonian, Neo-Assyrian, Neo-Babylonian, Persian, unknown wr. gigilim; gilim; gigilim-sa; kilib "a rope of twined reeds; reed post"

šatuku [MATTRESS] N (67x) Old Akkadian, Lagash II, Ur III, Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian wr. ša3-tuku5; ša3-tuku; ša3-an-tuku; ša3-tug2tuku5; tug2ša3-tuku5; šag4-ba-tuku; ša2-ba-tuku; tug2ša-tuku2; ša3-da-ga "mattress; webbed mat (for a bed); felt; padding"

mangaga [FIBERS] N (158x) Old Akkadian, Ur III, Old Babylonian, Neo-Assyrian wr. mangaga; mangaga(KA×(U.U.U)); ma-an-ga-ga; ešma-ga-ga; ešman-ga-gu; ešmangaga; man-ga-ga "date-palm fibers"

su [FIBERS] N (58x) Old Babylonian, Middle Babylonian, Neo-Assyrian, Neo-Babylonian, unknown wr. ešsu11; su11; ešzi; su11zu; ešsu11zu; su; su6 "date-palm fibers"

gugiresir [ASSIGNMENT] N (54x) Ur III wr. gu2-gir; gu2-gir-esir2; gu2-gir-esir2-ra; gu2-gir-ra "a work assignment, treating palm leaflet mats with bitumen"