


HARAPPAN CIVILIZATION

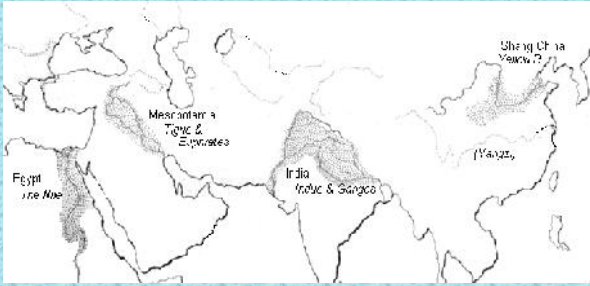
हड़प्पा सभ्यता



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Early River Valley Civilizations

- Sumerian Civilization - Tigris & Euphrates Rivers (Mesopotamia)
- Egyptian Civilization - Nile River
- Harappan Civilization - Indus River
- Ancient China - Huang He (Yellow) River



NOMENCLATURE

- ❖ Indus Valley Civilization
- ❖ Harappan Civilization

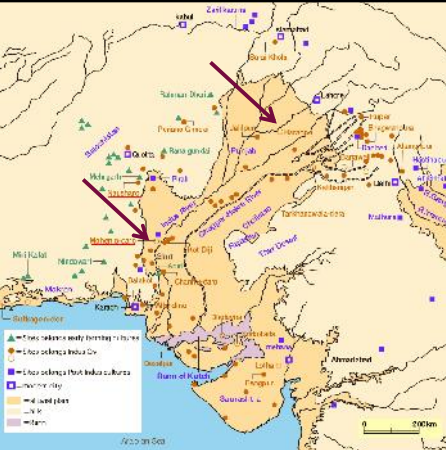
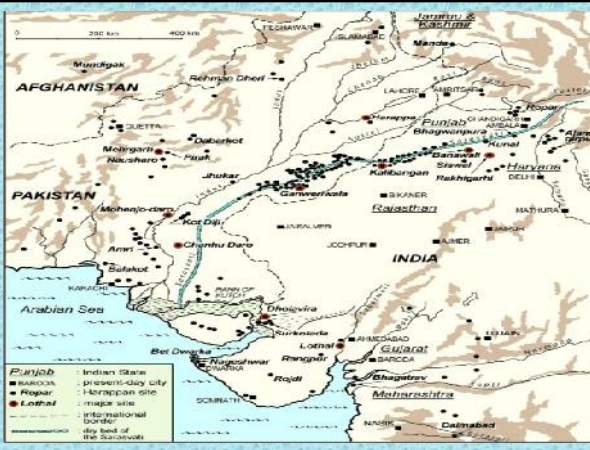
Harappan Sites and Extention

हड़प्पा कालीन स्थल और विस्तार

▪ Harappa	
▪ Mohenjodaro	
▪ Chahnuddaro	North- Manda (Kashmir)
▪ Kalibangan	South- Malwan/Bhagatrap (Gujrat)
▪ Lothal	East- Alamgirpur (Uttar Pradesh)
▪ Dhovlavira	West- Sutkagan-dor (Baluchistan)
▪ Rupar	
▪ Sutkagan Dor	North to South= 1400 km
▪ Alamgirpur	East to West= 1600 km
▪ Rakhigarhi	
▪ Sutkotda	

Location

Dried-up tributaries of Indus River: Known as Ravi River and Saraswati River

Geography

- ☞ Covered most of Pakistan, in addition to the western states of India.
- ☞ A majority of the sites found were on or near river embankments.
- ☞ Located in the northeastern Pakistan Punjab province, on the left bank of the Indus River.

Discovery

- The ruins of Harappan were first described by Charles Masson in 1844
- In 1857, the British authorities used Harappan bricks in the construction of the East Indian Railway line connecting Karachi and Lahore
- In 1912, Harappan seals with then unknown symbols were discovered by J. Fleet, which triggered an excavation campaign under Sir John Marshall in 1921-22

Periodization

- Early Harappan
- Mature Harappan
- Late Harappan

CHRONOLOGY

Carbon-Date

2300 BC -1750 BC

Facts to Remember

- Surkotada is the only Indus site where the **remains of a horse** have actually been found.
- A small pot was discovered at Chanhudaro which was probably an **inkpot**.
- Terracotta seals found at Mehargarh were the earliest precursors of the Harappan seals.
- Main types of seals are the square type with a carved animal and inscription and rectangular type with inscription only.

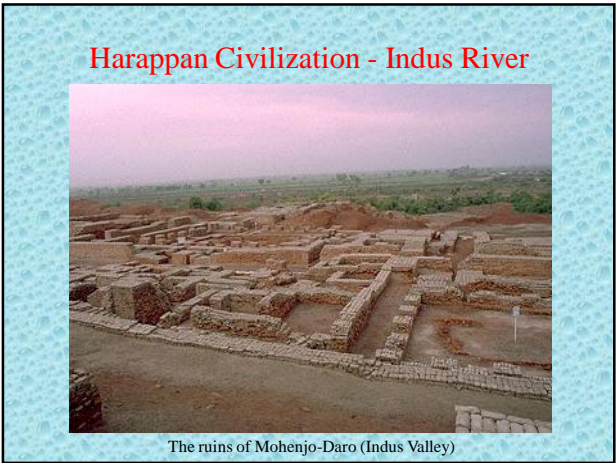
- Harappan pottery is bright or dark red and is uniformly sturdy and well baked.
- It was chiefly made and consists of both plain and painted ware and plain variety being more common.
- Harappan people used different types of pottery such as glazed, polychrome, incised perforated and knobbed.

- Evidence of sea and river transport by ships and boats in several seals and terracotta models have been found apart from the dockyard at Lothal. Representations of ships are found on seals found at Harappa and Mohenjodaro.
- Apart from Lothal in Gujarat, the three Harappan sites on the Makran coast - Sutkagendor, Sotkako and Khairia kot have been generally considered to have been posts in the maritime links with the Gulf and Mesopotamia.

- At Kalibangan the lanes and roads of the city were built in a definite proportion. Lanes were 1.8 mts wide and the roads were 3.6, 5.4 and 7.2 mts wide.
- The Mohenjodaro, the length of the Great Bath was 12 mtrs, breadth was 7mtrs and depth was 2.5 mtrs.
- In the south-west of Mohenjodaro there was a granary which covers 55 x 37 mtrs area. It is surrounded by verandas on four sides. There were 27 blocks of solid blocks of solid bricks in granary. It was divided into 3 parts.

- In Harappa the Granary was outside the Fort. In the Lothal port, there was a dockyard which was 216 mtrs in length and 37 mtrs in breadth.
- Leg bone of elephant was found at Kalibangan.
- Copper rhino, copper chariot and copper elephant found at Daimabad.
- Harappan city with three divisions namely-citadel, middle town and lower town was at Dholavira.
- Ragi was not known to the Indus people.

- ### Town Planning of Harappan Civilization
- Harappa & Mohenjo-Daro
 - constructed of the same type and shape of bricks.
 - Both served as important centre of their respective provinces.
 - They were laid out in grids.
 - These people were incredible builders.
 - The remains of the cities signifies there were no social class in this civilization.



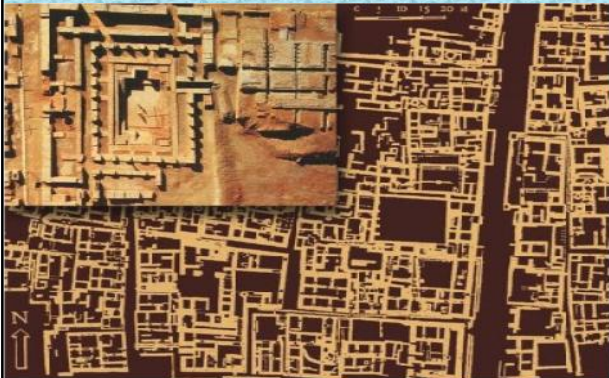
Mohenjo-Daro (mound of the dead)

- Harappan culture (Indus valley, now Pakistan)
- Peak around 2000 BC
- About 35,000 residents
- Assembly halls, giant granary, towers, and great bath in the citadel
- Axial layout
- Centrally planned (similar to other Harappan cities)
- Covered sewers

Plan of Harappa

- One striking feature of Harappan civilization was that throughout the large territory there was a remarkable degree of standardization in not only in architectural styles, but also weight and measures and even brick sizes.
- The layout of the major cities indicates that they were planned before they were built, rather than rising up organically as the population grows, like today.

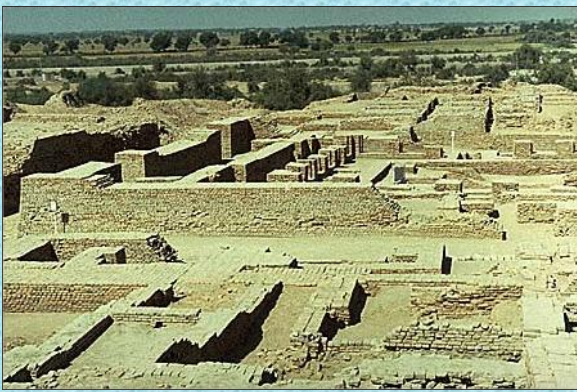
Grid Pattern



Architectural Remains

- The city was built on a grid pattern in rectangular block; buildings were made of standard size mud or baked bricks; had sewage and drainage systems
- Large streets
- Residence house constructed around the courtyard; upper stories also -located on the East side of the city
- Granaries and citadel on the West side
- Baths- provided water for residences or may have been used for general bathing and ritual ceremonies (made of brick and sealed with bitumen)

House Planning



Brick

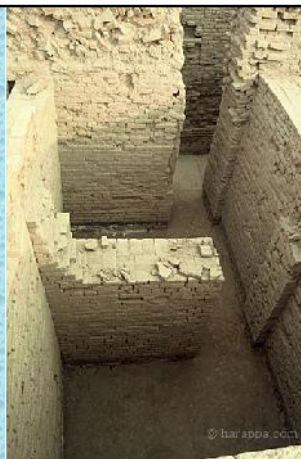
28cmx14cm x7cm

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Houses

- Houses were one or two stories high, made of thick, baked brick walls, with flat roofs, and high ceilings to keep the rooms cool during the hot summers.
- Each was built around a courtyard, with windows overlooking the courtyard. The outside walls had no windows.
- The dwelling places in the cities indicate a large degree of social stratification, but nearly all houses had indoor plumbing with showers and toilets.



In the lower courtyard was a circle of bricks which might have been the site of a sacred tree. The walls in the right foreground may have been part of a large water tank.



Many houses had stairs leading to upper courtyards of the building or to a second floor.



Bathroom and Drains

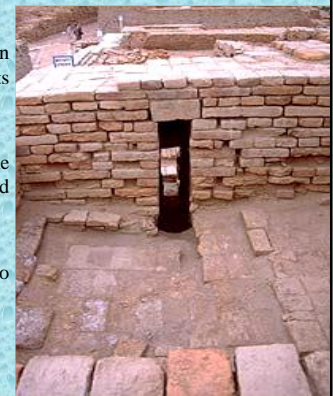


Toilets would have been an essential feature in Mohenjodaro. This brick structure had a hole in the top that was connected to a small drain leading out of the base into a rectangular basin. Early excavators suggested this might have been a toilet.



Houses and Running Water

- Each home had its own private drinking well and its own private bathroom.
- Clay pipes led from the bathrooms to sewers located under the streets.
- These sewers drained into nearby rivers and streams.



First Urban Sanitation System

- The people had water borne toilets in each house. The houses were lined with drains covered with burnt clay bricks (burning makes clay harder, more dense). The system had manhole covers, chambers, etc., to facilitate maintenance. It was the first form of sanitary engineering.
- From a room that appears to have been set aside for bathing, waste water was directed to covered drains, which lined the major streets.



Earliest Form of Sanitary System

- 1st known toilets and running water in residential buildings in the world.
- By 2500BC, highly developed drainage system where wastewater from each house flowed into the main drain.
- The ancient Indus systems of sewage and drainage that were developed and used in cities throughout the Indus Empire were far more advanced than any found in contemporary urban sites in the Middle East and even more efficient than those in some areas of modern Pakistan and India today.



Well

- A large public well and public bathing platforms were found in the southern part of Mound AB at Harappa.
- These public bathing areas may also have been used for washing clothes as is common in many traditional cities in Pakistan and India today.



Wells

- Private wells were rebuilt over many generations for large households and neighborhoods.
- This well in DK G area at Mohenjo-daro stands like a chimney because all of the surrounding earth has been removed by excavation.



This well located in DK-B area was originally surrounded by a paving that has recently been reconstructed



This large room or courtyard was filled with a solid mud brick platform that was almost entirely excavated to investigate the underlying room. A section of the platform has been preserved beneath the tin roof on the left and part of the platform is still visible in the foreground and in the top right hand section.



This room in VS area was made with bricks set on edge to create a watertight floor. A small well was located in the southeast corner (top right) and circular brick depressions were set into the floor, presumably to hold pottery vessels. The early excavators suggested that the room might have been a dyer's workshop.



A small room located at the edge of the street (in the center of the photograph) is where fourteen skeletons of so-called massacre victims were discovered.



In some neighborhoods, large courtyards were connected to numerous smaller buildings built at different levels. The plastered wall on the left supported houses at a higher level. A large corbelled arch drain that was later blocked is seen emerging from a wall in the background.



Streets

- At Mohenjo-Daro narrow streets and alleyways are off of the major streets, leading into more private neighborhoods.
- Many of the brick houses were two stories high, with thick walls and high ceilings to keep the rooms cool in the hot summer months.



Narrow Lane

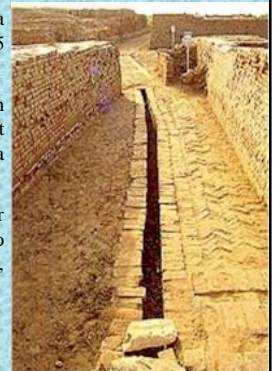


Looking south along Street 3, which runs parallel to First Street in HR area

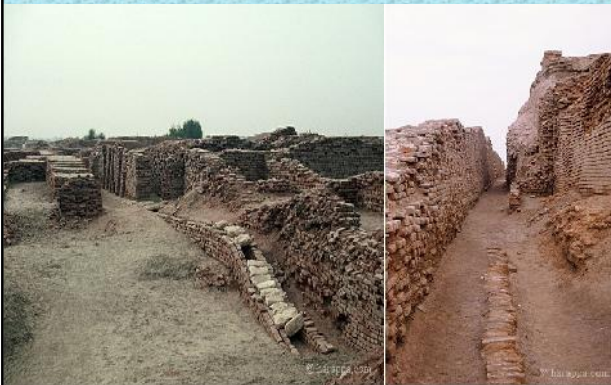


Mohenjo-Daro and Harappa

- The lower city was laid out in a gridiron with the main streets about 45 feet wide.
- Private houses, almost every one with its own well, bathing space, and toilet consisting of a brick seat over a drainage area.
- Brick-lined drains flushed by water carried liquid and solid waste to sumps, where it was carted away, probably to fertilize nearby fields.



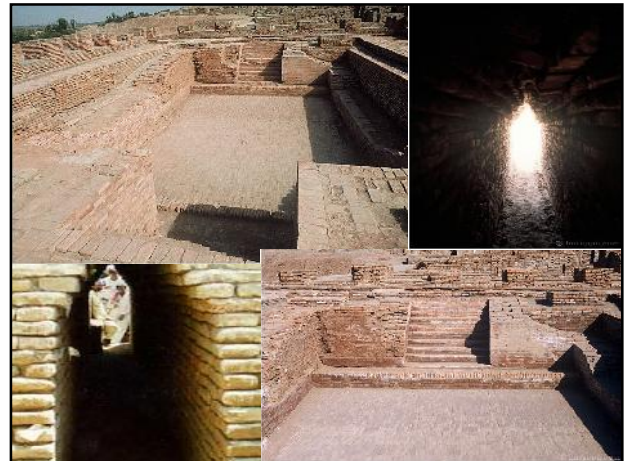
Covered Drains in Streets



The Great Bath

- The "great bath" is the earliest public water tank.
- The tank measures approximately 12 meters north-south and 7 meters wide, with a maximum depth of 2.4 meters.
- Two staircases lead down into the tank from the north and south and small sockets at the edges of the stairs are thought to have held wooden planks or treads.
- At the foot of the stairs is a small ledge with a brick edging that extends the entire width of the pool.

Great Bath



Pillared Hall



Granery (Mohenjo-Daro)

- It is a brick structure that was built on a massive brick foundation over 45 meters north-south and 45 meters east-west.
- Two rows of six rooms that appear to be foundations are arranged along a central passageway that is about 7 meters wide and partly paved with baked bricks.
- Each room measures 13.2 by 6.1 meters and has three sleeper walls with air space between them.



Workmen's Platforms nearby Granery

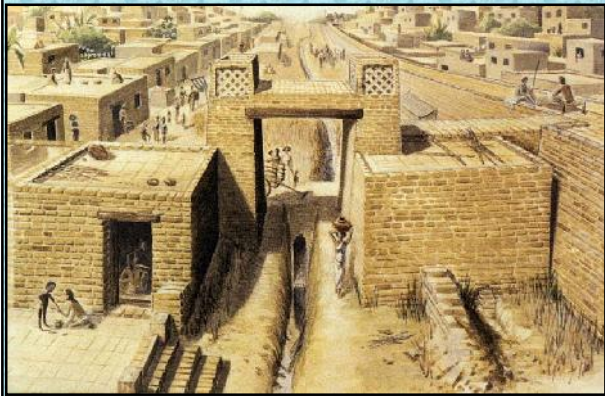


Residence of priests

A large open space (10 m. sq.) is surrounded by a wall that had 13 openings, possibly for windows. This unique structure is containing around 78 rooms and passageways, but no well. The building lies to the east of the Great Bath.



Harappan cities (artist's conception)



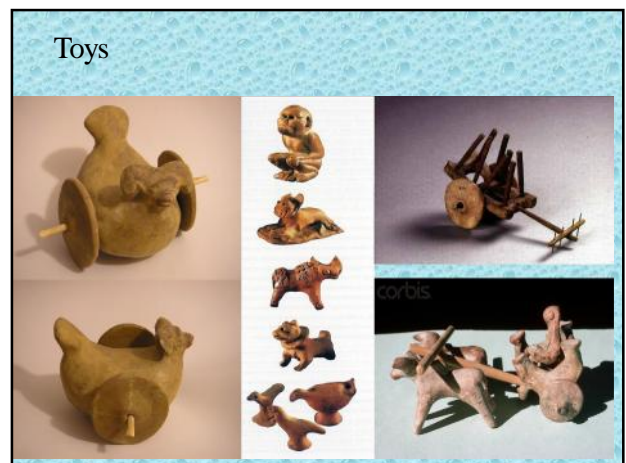
SCULPTURE

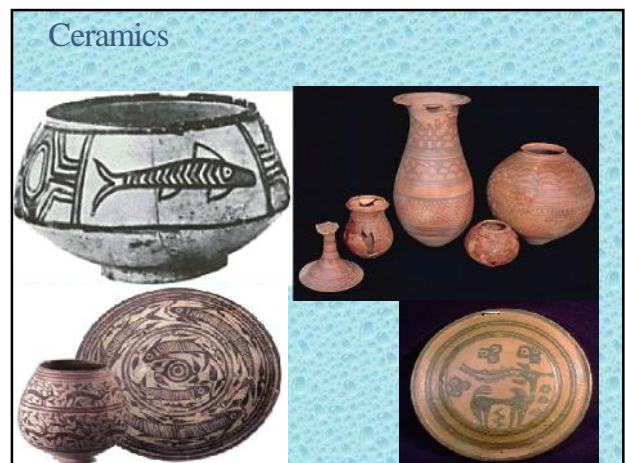
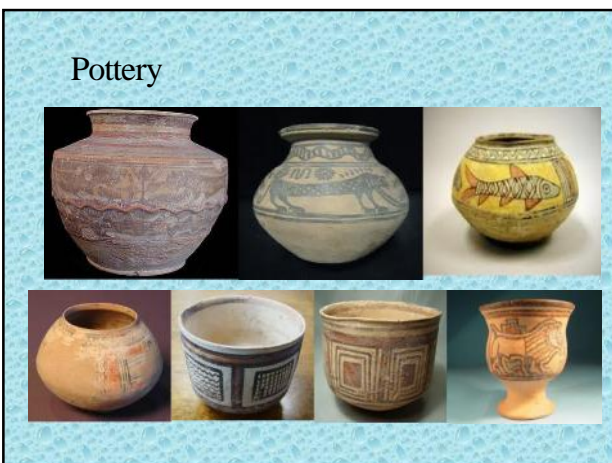
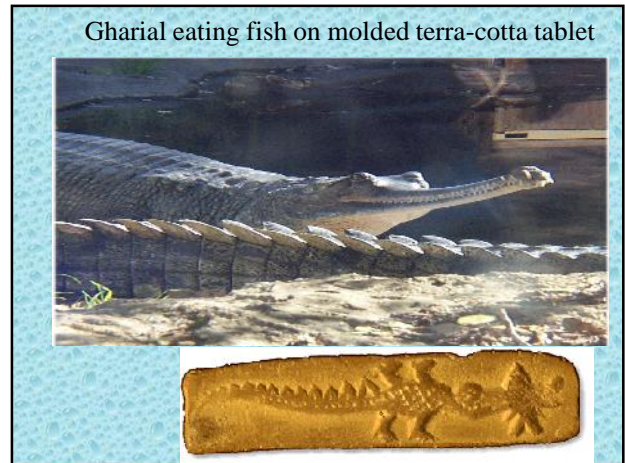
Dancing Girl



Figurine of Dancing Girl of bronze

Dancing Girl limestone







Seals

- Seals carved with a copper burin, coated with alkali, and baked to glaze the surface; depicted animals (e.g. humped back bull, bull, goat, elephant, crocodile) mythical animals (e.g., unicorn) standing in front of an incense burner or a trough, human figures; more than 4000 have been recovered.
- Inscription of seals (with 3-10 characters) which are not decipherable; may be used for business as the seals to signify the ownership of traded merchandise; writing disappeared for 1500 years





Ornaments

- This collection of gold and agate ornaments includes objects found at both Mohenjo-Daro and Harappa.
- At the top are fillets of hammered gold that would have been worn around the forehead.
- The other ornaments include bangles, chokers, long pendant necklaces, rings, earrings, conical hair ornaments, and broaches.
- These ornaments were never buried with the dead, but were passed on from one generation to the next.
- These ornaments were hidden under the floors in the homes of wealthy merchants or goldsmiths.

Bead of Stones





The central ornament worn on the forehead of the famous 'priest-king' sculpture from Mohenjo-daro appears to represent an eye bead, possibly made of gold with steatite inlay in the center.

Gold Disc



Board Game



Stone Implements



Standardized Weights & Measures



- Cubical weights were found in graduated sizes in Harappa.
- These weights conform to the standard Harappan binary weight system that was used in all of the settlements.
- Probably for controlling trade and quite possibly for collecting taxes.
- The smallest weight is 0.856g and the most common weight is @13.7g. (a 1/16 ratio)

Language/Writing

- The Indus (or Harappan) people used a pictographic script.
- Some 3500 specimens of this script survive in stamp seals carved in stone, in molded terracotta and faience amulets, in fragments of pottery, and in a few other categories of inscribed objects.
- In addition to the pictographic signs, the seals and amulets often contain iconographic motifs, mostly realistic pictures of animals apparently worshipped as sacred, and a few cultic scenes, including anthropomorphic deities and worshippers.
- This material is important to the investigation of the Harappan language and religion, which continue to be major issues.

The origins of Indus writing

- The origins of Indus writing can now be traced to the Ravi Phase (c. 3300-2800 BC) at Harappa.
- Some inscriptions were made on the bottom of the pottery before firing.
- This inscription (c. 3300 BC) appears to be three plant symbols.



Ancient Indus

SCRIPT	SIGN	MEANING
Archaic Sumerian		mountain hill, country foreign country
Hieroglyphic Egyptian		hill, country foreign country mountain
Archaic Chinese		mountain hill mound
Hieroglyphic Hittite		citadel country
Ancient Indus		?



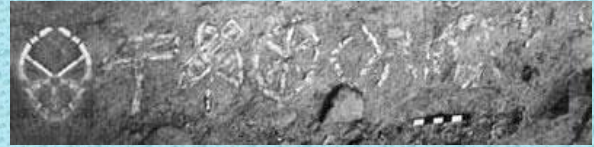
- In addition to inconvenient water, Harappan civilization remains mysterious because historians can't read Harappan script.
- The civilization consisted of literate people who used Dravidian language to communicate.
- Harappan script seems to have used 400 characters that were both phonetic and logographic on thousands of clay seals and copper tablets.

Pictogram Writing

- Artifacts found are small square steatite seals of human and animal motif
- Writings couldn't be analyzed despite the help of philologists from all over the world
- Writings are also hard to match with proto-Dravidian, proto-Sramanic, vedic, or non-vedic scripts



Reading from right to left



Female Skeleton with Child Harappa



THANKS...