



## Excavations of Iron in Tamil Nadu

**For Prelims:** Iron Age, Palaeolithic age, Mesolithic Age, Neolithic Age, Megalithic culture, carbon dating

**For Mains:** Ancient Indian Civilizations

### Why in News?

Recent **carbon dating** of excavated finds in Tamil Nadu pushes evidence of **iron being used in India back to 4,200 years ago**.

- Before this, the **earliest evidence of iron use was from 1900-2000 BCE** for the country, and from 1500 BCE for Tamil Nadu.
- The latest evidence dates the findings from Tamil Nadu to 2172 BCE.

### What are the Findings?

- The **excavations are from Mayiladumparai** near Krishnagiri in Tamil Nadu.
- **Mayiladumparai is an important site** with cultural material dating back between the Microlithic (30,000 BCE) and Early Historic (600 BCE) ages.
- Among the other important findings is **evidence that the late Neolithic phase in Tamil Nadu has been identified** to have begun before 2200 BCE, based on a cultural deposit of 25 cm below the dated level.
  - Archaeologists also found that **black and red ware pottery was introduced in the late Neolithic phase itself**, rather than the widely held belief that this occurred in the **Iron Age**.

### What is the Historical Significance?

- **Production of Agricultural Tools:**
  - Invention of iron technology led to the **production of agricultural tools and weapons**, leading to production required for a civilisation ahead of economic and cultural progress.
    - There is **no known record of iron** being used in the Indus Valley, where copper was first utilized by Indians (1500 BCE).
- **Useful in Deforestation:**
  - Deforestation occurred **only after humans began using iron tools to clear dense forests** and bring land into agriculture, because copper tools would have been difficult to use to clear dense forests and bring land into agriculture.
- **Socio-economic Changes:**
  - With the **latest evidence tracing our Iron Age to 2000 BCE from 1500 BC**, it can be assumed that the cultural seeds were laid in 2000 BCE.
  - Around 600 BCE, iron technology led to massive production triggered by socio-economic changes - the **Tamil Brahmi script**.
    - The Tamil Brahmi scripts were **once believed to have originated around 300 BCE**, until a landmark finding in 2019 pushed the date back to 600 BCE.

- This dating narrowed the gap between the Indus Valley civilisation and Tamilagam/South India's Sangam Age.

## Stone Ages

- **Palaeolithic (Old Stone) Age:**
  - Basically a **hunting and food gathering culture**.
  - **Palaeolithic tools** include sharpened stone, chopper, hand axe, scraper, spear, bow and arrow, etc. and were generally made up of hard rock quartzite.
  - Rock paintings and carvings found at Bhimbetka, Madhya Pradesh reflect upon hunting as the main subsistence activity.
  - Palaeolithic age in India is **divided into three phases**: Early or Lower Palaeolithic (50,000 – 100,000 BC), Middle Palaeolithic (100,000 – 40,000 BC) and Upper Palaeolithic (40,000 – 10,000 BC).
  - Homo sapiens mark their presence in upper palaeolithic age.
- **Mesolithic (Middle Stone) Age:**
  - The age is marked by **transition from Pleistocene period to Holocene period** and favorable changes in the climate.
  - The early period of Mesolithic age marks the hunting, fishing and food gathering.
  - Domestication of the animals began in this age.
  - The tools called Microliths were smaller and had improved geometry than the Palaeolithic age.
- **Neolithic (New Stone) Age:**
  - Referred to as the **concluding phase of the Stone Age**, the age heralded the beginning of food production.
  - Sedentism (living in one place for a long time) use of pottery, and invention of crafts are characteristics feature of neolithic age.
  - The neolithic tools composed of heavy ground tools like pestles, grinders, pounders and also axes and sickles.
- **Megalithic culture:**
  - Megaliths refer to **large stone structures** that were constructed either as burial sites or as commemorative sites.
  - In India, **archaeologists trace the majority of the megaliths to the Iron Age** (1500 BC to 500 BC), though some sites precede the Iron Age, extending up to 2000 BC.
  - **Megaliths are spread across the Indian subcontinent**. Majority of them are found in peninsular India, concentrated in the states of Maharashtra (mainly in Vidarbha), Karnataka, Tamil Nadu, Kerala, Andhra Pradesh and Telangana.

**Source: IE**

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