Tamilnadu Iron Age

Why in News?

*A groundbreaking study reveals that Tamil Nadu's Iron Age began as early as **3,345 BCE**, predating the Hittite Empire's iron usage by a millennium.*

- **Sivagalai** -It is an Iron Age habitation-cum-burial site in the Thamirabarani river valley in Thoothukudi district.

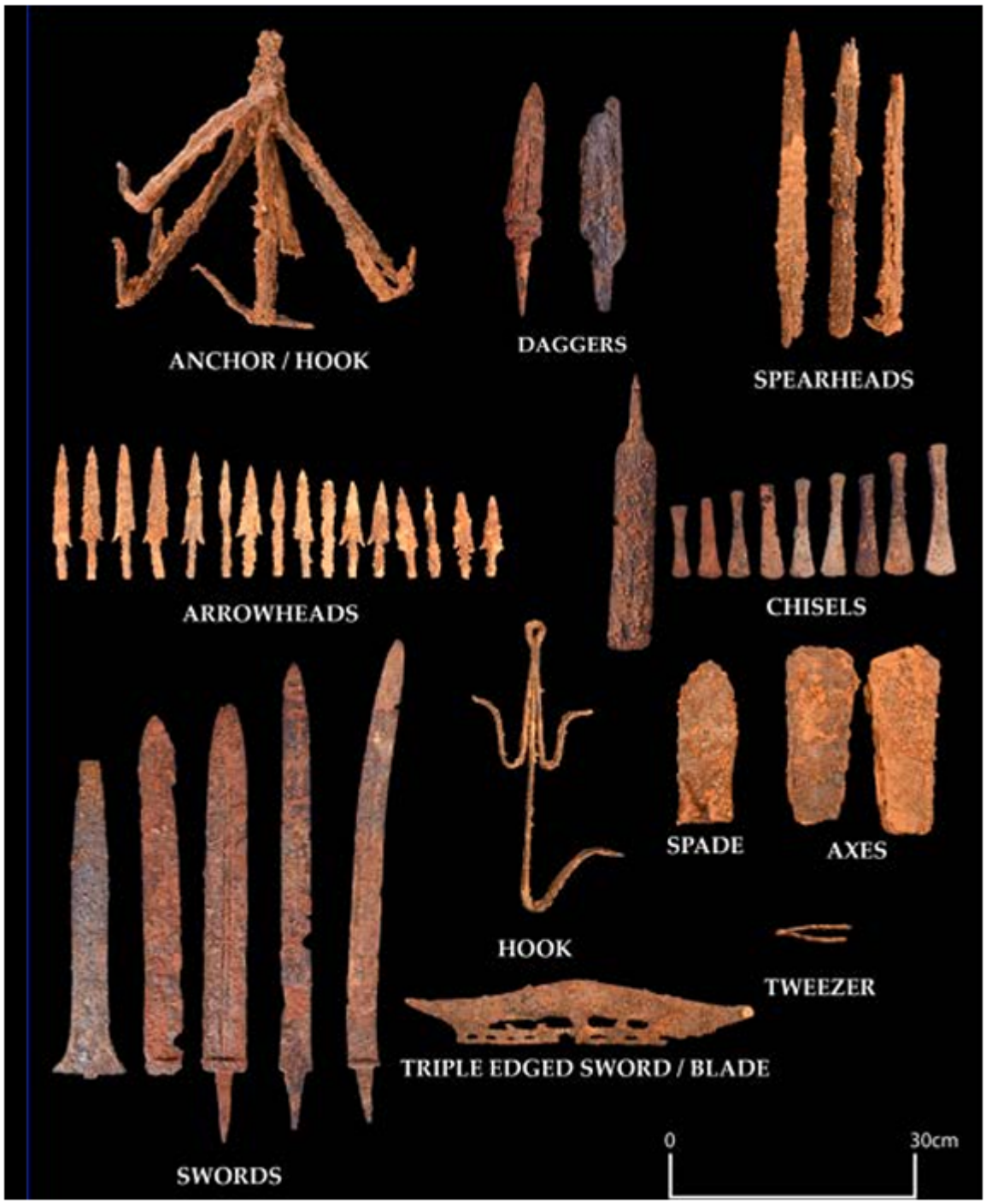


- **Sivagalai excavation** - A total of 24 trenches were excavated at these sites, which exposed around 160 urns, a majority of them being redware
- **Findings** - Skeletal remains, paddy grains, over 85 iron objects including knives, arrowheads, chisels, axes, rings, and swords, were found at the site.



- **Radiometric dating** - The samples from Sivagalai were analyzed by three prestigious research institutions
    - Beta Analytics in the United States
    - Physical Research Laboratory in Ahmedabad
    - Birbal Sahni Institute of Palaeosciences in Lucknow.
- **Advanced dating techniques** - The samples from Sivagalai, however, were subjected to advanced dating techniques
    - Accelerometer mass spectrometry radiocarbon (AMS14C) dating for charcoal
    - Optically stimulated luminescence (OLS) dating for ceramics.
- **The Report** – Findings of the dating study were presented as 'Antiquity of Iron: Recent Radiometric Dates from Tamil Nadu', authored by K Rajan and R Sivanantham.
- **Findings** - Radiometric dating of burial urn samples from Sivagalai indicate a thriving Iron Age civilization in southern India in 4th millennium BCE, contemporaneous with copper civilization of Indus Valley.
- While the regions to the north of the Vindhyas were still in the Copper Age, southern India may have entered the Iron Age due to a lack of commercially exploitable copper ores.
- **Adichanallur charcoal** - Adichanallur in Thoothukudi district, of Tamilnadu produced a charcoal sample associated with iron objects that was dated to 2517 BCE.
- **First smelted iron** - For the first time in the world, smelted iron has been dated back to the middle of the third millennium BCE.
- **Hittite Empire (in modern-day Turkey)**- This was believed to be the first civilization to use iron, with evidence dating back to around 1,380 BCE.
- **Other Iron regions of India** - Brahmagiri in Karnataka and Gachibowli near Hyderabad, were dated to around 2140 BCE and 2200 BCE, respectively.

Adichanallur Iron Objects



References

1. The Economic Times | Did the Iron Age actually begin in Tamil Nadu?
2. The Indian Express | Tamilnadu Iron Age
3. The Hindu | Sivagalai sheds light on iron's antiquity in Tamil landscape

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