

Woolly Mammoth

Prelims: Current events of national and international importance

Why in News?

The world's oldest RNA was found in a 40,000-year-old woolly mammoth recently.

- **Yuka Mammoth** - In 2010, the mummy of a juvenile mammoth was discovered on Siberia's Arctic coast.
- The animal, nicknamed "Yuka" after the nearby village of Yukagir, had been frozen for nearly 40,000 years.
- The permafrost preserved its carcass in exquisite detail, with patches of reddish fur, a twisted trunk, and even its brain intact.
- **Recent Scientific Interest** - Yuka's tissues preserve traces of **ribonucleic acid (RNA)**, genetic molecules that are crucial to life but usually deteriorate shortly after death.
- These bits of genetic material have helped construct the species' genome, revealing how closely mammoths are related to living elephants.
- Scientists are exploring "**de-extinction**" using gene-editing (e.g., CRISPR) to introduce mammoth traits into Asian elephants

Woolly Mammoth

- **Scientific Name** - *Mammuthus primigenius*
- The woolly mammoth was a large, elephant-like mammal that lived during the Ice Age (Pleistocene epoch) and went extinct about 4,000 years ago.
- **Distribution** - Lived across Northern Eurasia and North America.
- **Habitat** - Adapted to extremely cold, tundra-like environments.
- **Physical Features**
 - Thick shaggy fur and dense undercoat
 - Curved long tusks
 - Small ears to reduce heat loss
 - A hump of fat on the back for insulation and energy storage
- **Diet** - Herbivore, fed on grasses, sedges, shrubs, and herbs and had flat

teeth for grinding tough vegetation

- **Adaptations to Cold**

- Layer of fat under skin
- Reduced extremities exposed to cold
- Hair-covered body

- **Extinction**

- Factors believed to have caused extinction:
- Climate change after the Ice Age
- Human hunting
- Habitat loss
- Small isolated populations suffered from inbreeding



Reference

[National Geographic | World's oldest RNA](#)