

# INDIA'S FOSSIL HERITAGE AT RISK

The discovery of the giant snake fossil *Vasuki indicus* in Western India has highlighted the absence of a national fossil repository and legal safeguards against fossil theft, vandalism, and illegal trade.

## Recent Fossil Discoveries

**Vasuki indicus** – A 47-million-year-old giant snake fossil, measuring approximately 49 feet in length, was recently discovered in India, highlighting the country's rich paleontological heritage.

**Significance** – Such discoveries provide key insights into prehistoric life, including the evolution of large reptiles and their ecosystems.

## India's Fossil Record and Geological Significance

**Geological History** – India's unique fossil record stems from its separation from Gondwanaland (~150 million years ago) and collision with the Asian continent (~50–60 million years ago).

**Types of Fossils** – Fossils in India include:

1. **Ancient plants** – showing vegetation and climate evolution.
2. **Dinosaurs** – remains of large terrestrial reptiles.
3. **Early mammals** – shedding light on mammalian evolution.
4. **Whale ancestors** – such as *Indohyus*, a crucial link in cetacean evolution.

## Challenges in Fossil Preservation in India

**Lack of National Repository** – India does not have a centralized national fossil repository, hindering systematic preservation and research.

**Absence of Legislation** – There is no comprehensive law governing fossil protection, leaving specimens vulnerable.

**Risks to Fossils** – Fossils face threats from:

1. Vandalism and accidental damage.
2. Theft from museums and excavation sites.
3. Illegal sale in domestic and international markets.
4. Private hoarding without proper cataloguing.

**Notable Incidents** – Dinosaur eggs stolen from Mandav museum (2013). Fossils sold online or at international auctions, sometimes fetching millions.

**Private Collections** – Institutions like the Ranga Rao–Obergfell Trust hold significant fossils, but many remain unsorted and scientifically unstudied, risking loss or deterioration.

## Global Context and Implications

**High Market Value** – Fossils can fetch tens of millions of dollars at auctions – e.g., a *Stegosaurus* fossil sold for \$44.6 million at Sotheby's (2024).

**International Safeguards** – UNESCO Convention (1970) aims to prevent illicit import, export, and transfer of ownership of cultural and heritage objects, including fossils.

**Scientific Importance** – India's fossils are crucial for understanding:

1. Evolutionary history of dinosaurs, mammals, and whales.
2. Patterns of prehistoric biodiversity, climate change, and continental drift.

**Cultural Heritage** – Fossils are not only scientific treasures but also part of India's natural heritage, and unregulated loss could diminish global understanding of evolution.

## Way Forward

**National Fossil Repository** – Establish a centralized repository for cataloguing, preserving, and studying fossils.

**Legislative Measures** – Implement strong laws to protect fossils from theft, illegal trade, and vandalism.

**Research and Collaboration** – Encourage academic research, international collaboration, and public awareness to safeguard India's paleontological wealth.

**Museum and Public Display** – Enhance museums and educational platforms to showcase fossils, promoting science literacy and cultural appreciation.

Source: <https://www.thehindu.com/sci-tech/science/dinosaur-egg-fossils-india-risk-auction-abroad/article69974192.ece>

