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Bhimbetka

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Why is in news? Indian scientists refute earlier find of fossil of earliest animal in Bhimbetka

- Indian scientists have proved that the **Indian Dickinsonia fossil** that had been originally reported from UNESCO World Heritage Site Bhimbetka Cave Shelter in an earlier research in 2021, was **actually a left-over impression of a fallen beehive, not a true fossil**.
- Dickinsonia** is an **extinct genus** of lifeforms that lived during the late Ediacaran period in what is now Australia, China, Russia and Ukraine, most likely a basal animal.
- The **Vindhyan Supergroup**, an **archive of more than one billion years** of history of the earth, is **one the largest basins of the world** and is the site of many discoveries of fossil that explain how earliest life originate and diversified on the earth.
- Ediacaran fossils were traced to be the **earliest animals that existed on the earth around 550 million years ago** and hence evoke much interest among evolutionary biologists and palaeontologists.
- Fossil discoveries in the **Precambrian Era** (4000-538 million years of the earth history) claim to know about the evolutionary changes occurred in the life on the earth. Because of their implications on our understanding of the evolution of life on the earth, many of these discoveries are followed and scrutinized by some researchers.
- The group from **Birbal Sahni Institute of Palaeosciences (BSIP)**, an autonomous institute of Department of Science and Technology, travelled to the **spot of the discovery and scrutinised the fossil Dickinsonia tenuis**, an important Ediacaran fossil (the earliest animal), reported from the UNESCO World Heritage Site Bhimbetka Cave Shelter in 2021.
- Both fresh and decayed honey beehives were observed on the same bedding plane. A giant active beehive with several bees *Apis dorsata* attached to the hive was also found. Honeycomb structure was also observed. This evidence shows that the **described fossil was misinterpreted as Dickinsonia**.
- Further, Laser Raman Spectroscopy and X-Ray Diffraction (XRD) **confirmed presence of honey and wax** in the material, due to the activity of bees in forming hives.
- Such misinterpretations are rare, but they need to correct with due diligence for tracing the exact evolutionary trail and the correct study of the Indian geology.
- Bhimbetka:**
- The **Bhimbetka rock shelters** are an archaeological site in central India that spans the **prehistoric Paleolithic and Mesolithic periods**, as well as the historic period.
- It exhibits the **earliest traces of human life in India** and **evidence of Stone Age** starting at the site in Acheulian times.
- It is a **UNESCO World Heritage Site** that consists of seven hills and over 750 rock shelters distributed over 10 km.
- The Bhimbetka rock shelters were **found by V S Wakankar in 1957**.
- It is located in **Raisen District** between Hoshangabad and Bhopal in **Madhya Pradesh**.
- It is about 40 kilometres south-east of Bhopal in the foothills of the Vindhya Mountains.
- Some of the Bhimbetka rock shelters feature **prehistoric cave paintings** and the **earliest are about 10,000 years old (c. 8,000 BCE), corresponding to the Indian Mesolithic**.
- Most of these are done in **red and white on the cave walls**.
- A **multitude of themes** were covered in this form of rock art and it depicted scenes like **singing, dancing, hunting and other common activities** of the people staying there.
- The oldest of the cave paintings in Bhimbetka is **believed to be about 12,000 years ago**.

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