



Dickinsonia: Earliest Known Living Animal

Why in News

Recently, researchers have discovered three fossils of the earliest known living animal, the **550-million-year-old 'Dickinsonia'** on the roof of the [Bhimbetka Rock Shelters](#).

- The fossils were found in the **roof** of the **Auditorium Cave** at Bhimbetka Rock Shelters.

Note:

- It was believed that **sponges** were the oldest living organism however **there is currently no evidence that sponge-like animals conquered the oceans before 540 million years ago**, when the first unambiguous fossils of sponges and most other groups of animals start to appear in the geological record.
- The **earliest evidence for animals on Earth is now the 558 million-years-old Dickinsonia** and other Ediacaran animals.

Key Points

- **About Dickinsonia:**



- **Discovery:**

- [In September 2018, an international team of researchers claimed to have discovered the world's oldest fossil](#) of Dickinsonia, which first appeared around 571 million to 541 million years ago.
- Current fossil evidence dates back around 100 million years from Dickinsonia.

- **Period and Area:**

- It is an **extinct genus of basal animal** that lived during the late Ediacaran period in what is now Australia, Russia and Ukraine.

- **Basal animals** are animals which have **radial symmetry** in their body plans. They have very **simple bodies** and tend to be **diploblastic** (derived from only two embryonic cell layers).

- **Appearance:**

- Thought to represent the earliest flowering of **complex multicellular life on our planet**, these creatures arose in a world devoid of predators, and **had no need for hard protective carapaces or skeletons**.
 - Their **soft, squishy bodies** resembled tubes, fronds or even thin, quilted pillows, they bore scant similarity to the anatomy of animals today.

- **Classification:**

- Its affinities are presently unknown, its mode of growth is consistent with a stem-group bilaterian affinity, though **some have suggested that it belongs to the fungi or even an “extinct kingdom”**.
- The discovery of **cholesterol molecules in fossils of Dickinsonia lends support to the idea that Dickinsonia was an animal**.

- **Significance:**

- It is further proof of the similar **paleoenvironments** and **confirms assembly of Gondwanaland by the 550 Ma (mega annum)**.
 - A **paleoenvironment** is simply an environment that has been **preserved in the rock record** at some time in the past.
 - **Mega-annum**, usually abbreviated as Ma, is a **unit of time equal to one million years**.
 - It is commonly used in scientific disciplines such as geology, paleontology, and celestial mechanics to signify very long time periods in the past.
- This finding could help scientists **better understand the interaction of geology and biology that triggered the evolution** of complex life on Earth.

- **Bhimbetka Caves:**

- **History and Period Span:**

- 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.

- **Discovery:**

- The Bhimbetka rock shelters were found by **V S Wakankar in 1957**.

- **Location:**

- 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.

- **Paintings:**

- 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**.

[Source:TH](#)

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