

ANCIENT ROCKS IN INDIA GIVE CLUES TO EARLY LIFE

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Researchers have found the oldest clue yet to the mystery of animal life in ancient rocks and oils, including those from India, dating back at least 100 million years before the famous Cambrian explosion of animal fossils.

Researchers at the University of California, Riverside in the U.S. tracked molecular signs of animal life, called biomarkers, as far back as 660-635 million years ago during the Neoproterozoic era.

In ancient rocks and oils from India, Oman, Siberia, they found a steroid compound produced only by sponges, which are among the earliest forms of animal life. The “Cambrian Explosion” refers to the sudden appearance in the fossil record of complex animals with mineralised skeletal remains 541 million years ago.

“We have been looking for distinctive and stable biomarkers that indicate the existence of sponges and other early animals, rather than single-celled organisms that dominated the earth for billions of years before the dawn of complex, multicellular life,” said Alex Zumberge, a doctoral student at UCR.

The biomarker they identified, a steroid compound named 26-methylstigmastane (26-mes), has a unique structure that is currently only known to be synthesised by certain species of modern sponges called demosponges.

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