

Media Release

Chiefs of Staff, News Directors

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Where did we come from? Lecture series looks at the big questions

The University of Tasmania and the Royal Society of Tasmania are presenting the next two lectures in their Winter Series on New Scientific Understandings of Evolution of Life on Earth.

The speakers will focus on two periods of major importance for evolution – the “Boring Billion Years” and the “Cambrian Explosion of Life”.

The lectures commence tonight (**Wednesday 15 July**) at 7.30pm in the Stanley Burbury Theatre, Sandy Bay campus.

The president of the Royal Society and University Distinguished Professor, Ross Large, said the Winter Series is the society’s showcase annual lectures for fostering Tasmanian public engagement and participation in the quest for objective knowledge.

The first two lectures in June were highly successful and drew a large audience with a wide cross section, from students, to budding scientists, to experienced scientists and members of the community.

The latest talks will be presented by Indrani Mukherjee, a PhD student in Earth Sciences at the University of Tasmania, and Dr Diego García-Bellido, a visiting ARC Future Fellow from the University of Adelaide.

The Boring Billion Years in Earth’s History and its Significance Presented by Indrani Mukherjee (PhD student, University of Tasmania)

The time period from 1.8 billion years ago to 0.8 is widely known as the “Boring Billion” period. It is believed during this time the earth witnessed a period of geological and biological stand-still. This affected various geochemical and geophysical processes that control trace element nutrient supply in the ocean. That, in turn bogged down evolution of ancient life forms. But is it really boring, or is it our lack of knowledge about this time? This research examined the mineral pyrite to see if its nutrient levels over time could have created a sling-shot effect for the explosion of life in the oceans that followed this period of time.

The Cambrian Explosion of Life and Rise of Marine Species

Presented by Dr Diego García-Bellido, ARC Future Fellow, University of Adelaide

This presentation will look at Earth's oldest macroorganisms, Ediacara Biota. Most fossil localities only preserve shells, exoskeletons or bones, but some exceptional outcrops (known as Lagerstätten) preserve soft-bodied organisms, and even their internal organs and other delicate structures such as eyes or gills. The first –and best studied– such locality described for this period is the Burgess Shale in Canada. The only Cambrian Lagerstätte so far known in the Southern Hemisphere is the Emu Bay Shale in Kangaroo Island (South Australia), and it contains fossils of more than 50 species of Ediacara Biota, including worms and molluscs. This talk will discuss these organisms' highly controversial evolutionary relationships-and why some think they not should be included in the animal kingdom.

The lectures are supported by the University of Tasmania and the Geological Society of Australia.

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