



THE GEOLOGICAL SOCIETY OF NAMIBIA

PRESENTS

A TALK BY : DR GUY NARBONNE

TITLE : "WHEN LIFE GOT BIG: THE EDIACARA BIOTA AND THE ORIGIN OF ANIMALS "

DATE : THURSDAY, 10 MAY 2012

VENUE : AUDITORIUM OF THE GEOLOGICAL SURVEY OF NAMIBIA

TIME : 17H30

When Life Got Big: The Ediacara biota and the origin of animals

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Although microbial fossils first appeared three and a half billion ago, large recognizable fossils did not appear until just before the Cambrian explosion of life, a fact that perplexed even Charles Darwin in writing "The Origin of Species". Discovery of impressions of soft-bodied Ediacaran fossils dating throughout the final 40 million years of the Proterozoic provides an apparent solution for "Darwin's Dilemma". The oldest large and complex fossils, the Mistaken Point assemblage of eastern Canada, occurred coincident with a major rise in atmospheric oxygen and the meltdown of the last of the Proterozoic "snowball" glaciers 580 million years ago. The Mistaken Point fossils represent soft-bodied creatures living on a deep-sea bottom that were killed when they were catastrophically covered by eruptions of volcanic ash, exquisitely preserving them as fossils and forming "census populations" that can be studied using modern techniques in ecology. Most Mistaken Point fossils are "rangeomorphs", an extinct experiment in fractal life that dominated early stages of animal evolution. Younger Ediacaran assemblages in Russia and Australia show increasing soft-bodied complexity, including the appearance of bilaterian animals. Even younger Ediacaran fossils in Namibia include extinct experiments in modular life along with the world's first shelly fossils. The Ediacara biota disappeared abruptly 540 million years ago, most likely due to competition and predation from the evolving animals of the Cambrian "explosion".

“When life got big: the Ediacara biota and the origin of animals”. See abstract attached.



Guy Narbonne shows Sir David Attenborough evidence of the oldest large multicellular creature in the world at Mistaken Point during the filming of a BBC documentary. Photo: Richard Thomas, NL Parks and Natural Areas

Please note:

13-14 Sept. 2012: 2012 Namibian Copper Conference. The call for abstracts for presentations and posters, and for sponsors has been sent out. Please see our website: <http://www.geolsocnamibia.org/>

Best regards,

Isabella Kandjii
Acting Secretary

“If wrinkles must be written upon our brow, let them not be written upon the heart. The spirit should not grow old.” ~James A. Garfield