

Discovery of 450 Million Years Old 'Missing Link'

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A 15-year search for fossils in Africa has led to the discovery of eight fish specimens that are 450 million years old – 50 million years older than any previous fish fossil on the continent and amongst the oldest in the world.

Professor Richard Aldridge, of the Department of Geology at the University of Leicester, who co-led the scientific expedition, says the fossil discovery is among the most remarkable and exciting ever to be found on the continent. He said:

‘These exciting fossils help to fill in a ‘missing link’ in the evolutionary history of the very early fishes. They are new to science, and we have yet to describe them and to give them a scientific name.’

Scientists working on fossils in the Cedarberg Mountains around Clanwilliam, South Africa, unearthed the ancient remains of forms that represent the evolutionary stage before the fishes had any skeleton at all.

The scientific team, led by Professor Aldridge of the University of Leicester and Dr Hannes Theron of the University of Stellenbosch, South Africa, has been working on these deposits for fifteen years and many remarkable fossils have been recovered.

Professor Aldridge said: “These new fish finds are among the most exciting ever. People may wonder how we know that these fossils are fishes, when we have no bones with which to identify them. The answer is that the exceptional preservation displayed in these rocks enables us to

recognise the eyes, scales and even the liver of the animals. The impressions in the shale are very faint, but they are also very clear and diagnostic.”

The first, incomplete, specimen was found in 1994, just as the first elections in the new South Africa were taking place, and we nicknamed the fossil ‘Nelson’ in honour of the newly-elected President. In the eleven years since then no more specimens were found, until this year when the team, amazingly, recovered seven additional specimens.

Dr Theron provided further background: ‘These fishes come from a time in the remote past when Africa was in an ice age, and before any animals had colonised the land. They are preserved where they lived in a shallow sea fed by melt waters from the receding ice sheets.’

Source: University of Leicester

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