



University of  
South Australia



Barbara Hardy  
Institute

Jim Jago

## Research Profile

### Research Area Specialisation

Jim's main research interests are in Cambrian biostratigraphy and palaeontology. The Cambrian period is the name of the geological time between 542 and 488 million years ago. It was a time during which there was major development of life known as the Cambrian "explosion" that saw a rapid increase in the variety and complexity of life forms found as fossils. The early Cambrian period was the time when organisms developed the ability to secrete shells, thus markedly increasing their chances of being preserved as fossils. Jim's research of trilobites can be used to correlate the rocks of areas such as Tasmania, Antarctica and South Australia to assist in the understanding of the geological history of these areas which were juxtaposed during the Cambrian as part of the Gondwana supercontinent.

### Contributing to a better and sustainable environment

One of Jim's research projects involves studying modern sedimentology of the Port Gawler-Middle Beach area. This is an area of extremely rapid geological change, providing a model for the future ecology in the Port Gawler area. By researching the current rapid advance of mangroves and considering the impact of a proposed housing development nearby, Jim's research is important to understanding ecological change and its environmental effects. The research in Cambrian biostratigraphy and palaeontology uses the past to help us understand environmental impacts.



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*Great Research  
into Sustainability*

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## People

- Our researchers are scientists, engineers and social scientists
- We work collaboratively on real-world issues
- Over 100 researchers and 130 research students

## Projects

- Multidisciplinary projects focused on sustainability
- We work in partnership with government, industry and academia
- Extensive testing and evaluation services and consultancy expertise
- Our work is underpinned by community participation and education

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## Research Abstract

In association with Australian and international colleagues, Jim's major research work has led him to the study of the Emu Bay Shale Lagerstätte on Kangaroo Island. Lagerstätten are fossil assemblages in which the fossils are much better preserved than usual with features such as guts, antennae and eyes. The Emu Bay Shale Lagerstätte is one of the best Cambrian lagerstätten in the world providing a detailed insight into life during this time of major developments in the history of life. An example of this is the discovery of the oldest known quite complex eyes lending support to the notion that the development of sight was an important factor in the Cambrian "explosion" which saw a rapid increase in the variety and complexity of life forms.

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## Research areas of interest

- Palaeontology
- Biostratigraphy
- Sedimentology

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## Barbara Hardy Institute

Having the opportunity to work with like-minded people is an invaluable aspect of being a member of the Barbara Hardy Institute.

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## Keywords to describe Jim's research

- Cambrian
- Palaeontology
- Biostratigraphy
- Sedimentology



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*"Trilobites research can be used to correlate the rocks of areas such as Tasmania, Antarctica and South Australia and thus will assist in the understanding of the geological history of these areas."*