



Highly Commended

Science Writing - Commemorative Topic Year 3 - 4

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Extracts from Dr Reginald Sprigg's Journal

<https://www.arkaroola.com.au/reg-sprigg>

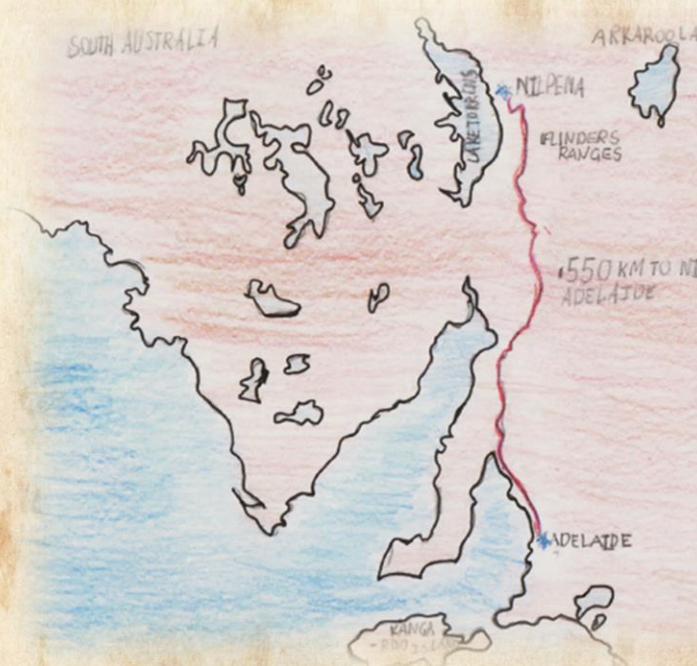
20th March 1946

It is a splendid day today (other than the fact that half of my coffee has just spilled on this page). It is my first day back on the dry plains of the Flinders Ranges. I have taken a job as a geologist for the South Australian Government. I have come up to the western edge of this vast area - 90,000 hectares. I'm just by the border of Lake Torrens at a place called Nilpena (I have sketched a map of my location). It's not much of a real lake. It looks rather like a muddy salty flat. I guess it would be a huge lake if there was enough rain to fill it.

Looking around at the land beside the lake it appears to be utterly dry, dusty & rocky. There used to be an ancient seabed here. Who would have thought? I have a wonderful feeling about this Nilpena spot. Over the next few days, I intend to dig across this vast area. I wonder what I will uncover?

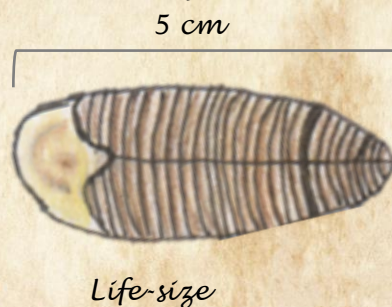
28th March 1946

Yesterday, I was back on the Nilpena Plains, when during a routine survey I came upon a hillside covered with sandstone, that to me seemed extremely old. Then, I came upon an exciting discovery! I had just taken a bite out of my spam sandwich when, from the corner of my eye, I caught a glimpse of an unusual shape in the stone. I may have already



mentioned that this area was a seabed floor. Normally, it wouldn't be an environment that would preserve fossilised life. However, some time ago I had come across a fossil at Tea Tree Gully (closer to Adelaide) that was preserved in a very similar environment. So, I thought there might be a fair chance one could get impressions preserved here as well. So with that in mind, I took my rusty chisel to it and sure enough I had soon unearthed a smashing fossil.

This may just be the most important fossil discovery of the century! I am uncertain yet, but I do think that this fossil might predate the Cambrian period. I will continue my research and plan to publish it in the coming months or years. I have sketched a picture of the fossil underneath this entry.



24th August 1947

It has been a busy year researching my discovery from last year at Nilpena. These are my scientific notes so far.

I have analysed the specimen, and it is 550 million years old. This pushes our knowledge of early life back 100 million years. This would mean it represents the oldest multicellular lifeform we know. It takes the form of a large, segmented worm, and it is the oldest example of a symmetrical creature with a distinct head & tail. There is evidence that it could move. I hypothesise that this motility was to let it search for food.

I cannot wait to present my findings for publication in the *Nature* journal and the International Geological Congress.

20th March 1948

I don't believe it! Preposterous! It has been almost two years since I came across that fossil. But, since then, *Nature* Journal & the International Geological Congress have both rejected my publication! I'm sure of my conclusions so only time will show how important this really is.

14th September 1958

Finally, some support for my discovery. My colleague, Martin Glaessner, at the University of Adelaide has confirmed that this ancient fossil indeed belongs to a time before the Cambrian Period. We have decided to call this the Ediacaran Period since I found the fossil in the Ediacara Hills in Nilpena. I wonder what we should name our little fossil find? Martin thinks it should be called Spriggina.

*It was many years later after Sprigg's death that the Ediacaran period became officially recognised as the Period before the Cambrian Period.
- Note by Historian*

References:

1. <https://www.parks.sa.gov.au/parks/nilpena-ediacara-national-park>
2. <https://adelaideaz.com/articles/With%20ASIO%20watching,%20Reg%20Sprigg%20meets%20Mark%20Olipphant%20in%201940s%20search%20for%20uranium%20at%20South%20Australia%27s%20Mt%20Painter,%20Radium%20Hill>
3. <https://pubs.geoscienceworld.org/hess/earth-sciences-history/article-abstract/7/1/46/615540/ON-THE-1946-DISCOVERY-OF-THE-PRECAMBRIAN>
4. <https://ediacarafoundation.org/ediacaran-fossils/>
5. <https://www.abc.net.au/listen/programs/the-history-listen/the-curious-geologist/13477534>
6. <https://adelaideaz.com/articles/reg-sprigg-makes-world--history-shaking-ediacaran-fossils-find--during-work-for-south-australian-mines-department>
7. <https://www.amnh.org/research/paleontology/collections/fossil-preparation/history/techniques>
8. <https://aso.gov.au/titles/documentaries/changing-face-australia/clip1/>
9. <https://adelaideaz.com/articles/With%20ASIO%20watching,%20Reg%20Sprigg%20meets%20Mark%20Olipphant%20in%201940s%20search%20for%20uranium%20at%20South%20Australia%27s%20Mt%20Painter,%20Radium%20Hill>
10. <https://pubs.geoscienceworld.org/hess/earth-sciences-history/article-abstract/7/1/46/615540/ON-THE-1946-DISCOVERY-OF-THE-PRECAMBRIAN>
11. <https://pubmed.ncbi.nlm.nih.gov/31180184/>
12. <https://ediacarafoundation.org/ediacaran-fossils/>
13. <https://www.abc.net.au/listen/programs/the-history-listen/the-curious-geologist/13477534>
14. <https://aso.gov.au/titles/tv/peachs-australia-flinders-rang/clip2/>
15. <https://www.marinespecies.org/polychaeta/aphia.php?p=taxdetails&id=324572>

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Word count: 708