

With many thanks to Armstrong, Jenolan Staff at all levels have had the opportunity to read and to digest the original paper, published 2006 in *Australian Journal of Earth Sciences* 53(3): pp 337-405.

The Guides Office received a copy on 27th May and I was sent my own copy, having just spent the previous weekend in the company of Armstrong and other Caving -type Luminaries...(Tracey Campbell and I were happy to pose as photo-models for the new edition of the Wee Jasper Book!!)

Since then I have been fortunate enough to be able to assess the paper mentioned above, and to be able to observe those sites where Armstrong selected his primary samples. I have compared these sites with others at Jenolan that are known to many of the adventure guides.

But regarding the 340 m.y. clays--.....Dr. Dan makes a valid point regarding the provenance of the clays and it would seem to anyone reading the original paper, that the authors have chosen selectively not to use...

- samples which fill fissures,.. and
- those which are lithified...

“All the primary samples,..... are of remnants of sediments which once entirely or partly filled the cavities” ...pp 380 and 386

Surely then, the possible relationships between **the selected samples and the lithified sediments, which do penetrate the walls and ceilings**, should be thoroughly investigated. After all, the bedded clays within the limestone rock, some of which contain Silurian fossils are clearly around 400 million years old. The near-vertical nature of bedding within these claystone outcrops is clearly discernable and here is a source of old clays only metres away from the samples studied for the publication.

I for one, am not surprised at the ages measured. In fact, I would have expected more to come in at around 400 m.y, as long as the techniques used in the study by the C.S.I.R.O. were appropriate and accurate. The JRV9 primary sample gets closest and could be as old as 400 m.y. according to figure 14 (page 398).

On related issues in areas studied by myself I am impressed by: -

- symmetrical nature of the crystal vughs and cavities,
- widespread occurrence of previously unrecognised fossils, and
- similarity of limestone textures in this south east part of Australia.

In Armstrong's comments of 27 July 2006 on the inclusion of a date from clays sampled from a crystal cavity (vugh) from Selina Cave (J1C1 in the J. Earth Sciences study) he implies a relationship between these vughs and other “third generation caves”.. all at around 340 million years.

The provenance of this kind of clay should be critically analysed as well.

I could comment further, based on my own observations, but I shall wait to see if anyone is really interested.

