

# TW:eed

## Tetrapod World: early evolution & diversification

### Newsletter No 1, September, 2012

Not everyone uses the internet, so it's been suggested that we issue an occasional newsletter to keep people up to date with developments on the project. This is unlikely to be a regular event, since newsworthy progress is unpredictable.

### Project Launch

The initial meeting, launching the project, took place on 23rd July, with most participants able to attend. It was a good opportunity for people to meet and find out what the various teams would be up to. The main protagonists met earlier, while the Project Partners joined them later on.



**Principal Investigators, photo by David Millward, BGS**

Among many items discussed were ways of publicising the project, including a website, a blog and twitter. The website will be hosted by the British Geological Survey. Two domains have been secured – <http://www.tetrapods.org> and <http://www.tetrapods.co.uk> but at present there is no content, so all they do is redirect you to the BGS home page. Rob Clack hopes to load some content shortly. Carys Bennett, at the University of Leicester, has created the blog at <http://www.tetrapodworld.com>.

### Fieldwork, 4th – 11th August



**The cliffs south of Burnmouth, photo by Rob Clack**

Some of us spent time in Northumberland and the Borders Region of Scotland in the first week of August. Tim Smithson thought it would be prudent to show other people the various sites he and Stan Wood had been collecting from, so that was one of the main objectives of the week.



**Coquetdale site, photo by Rob Clack**



Jenny and Rob Clack have since thought that it would be a good idea to get GPS coordinates for the sites. Their phones are so antique they don't have such facilities, so they'll probably have to buy something suitable at some stage.

On the Monday a number of people met at Burnmouth so that those who'd not been there before could be shown the various beds from which fossils had been collected. It was immediately apparent that there's going to be some good cross-disciplinary exchange, when Tim Kearsley pointed out a palaeosol showing in the cliff at one point, an aspect of which others had been completely unaware. He explained that the red colour of the ancient soil indicated oxidising conditions, but that where a plant root had grown through it, the rotting process after it died had removed the oxygen, and the matrix there was green, indicating reducing conditions.

Rob and Jenny introduced their main local contact, Oliver Kieran, to the rest of the team. Oliver lives in the village of Burnmouth itself and knows who we should speak to if there are any issues we need to address. He has been very helpful to us in the past.

Tim Smithson, Jenny and Rob collected fossils and bulk matrix from one of the beds exposed below high water mark on the south side of the bay. This is being worked on in the lab in Cambridge and has already yielded some intriguing fossils, including a tetrapod jaw bone and a number of pieces of rhizodont fish.



**Team members at Burnmouth, photo by Rob Clack**

Rob spoke to Heather Aitchison, the Harbour Master's wife, about the possibility of snorkelling just outside the harbour mouth. We want to establish whether the beds from which we collected samples continue below low water across to the fault where the Silurian beds crop out, but in fact, Rob was so excited by the fossils they were finding on the other side of the bay that he didn't get around to doing that! He hopes to do so when we return in October.

Carys Bennet has discovered ostracods in some of the matrix recovered from Burnmouth. Ostracods are tiny fossil crustaceans which are sensitive to temperature and salinity, so should help us to understand the nature of the environment in which they lived.

## What Next?

- Preparation of fossils is already under way in Cambridge.
- Jenny Clack and Tim Smithson will be talking about the project at the Symposium of Vertebrate Palaeontology and Comparative Anatomy at Oxford University this week.
- Several members of the team will return to Burnmouth in the week of 14th - 20th October for further collecting.



**Composite panoramic photograph of the Willie's Hole site near Chirnside, photo by Rob Clack**

## Stan Wood



**Stan at Willie's Hole (photo courtesy of Mr Wood's Fossils)**



**and at Burnmouth, taken by Maggie Wood**

Stan was a dedicated professional fossil collector who contributed enormously to our knowledge of early tetrapods. He researched new localities and reopened old ones, working tirelessly to find spectacular fossils which are now housed in many institutions.

We had known for over a year that he was suffering from lung cancer, but it was still a shock to hear that he had died. Below is the text of an email Jenny Clack sent around to the team on Monday 10th September.

It is with great sadness that I heard from Tim, via Maggie, that Stan died on Sunday night. As you all know, it was largely down to Stan's efforts that our project could proceed, and he was delighted to know that it was going ahead. He worked on his fossil collection to the end in his indomitable way, and our science will continue to benefit from his insight, understanding and perspicacity. We shall remember him at our meeting later this week, and in our presentation on the current project, but his legacy will last well beyond the end of our project.

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