

## Figure captions for full-resolution versions of coral slab cross-sections

*A line drawing of each of these slabs appears in the main part of the thesis.*

- 02a\_fullres\_BUN-01.pdf : Cross-section of slab BUN-1, including full-resolution x-ray mosaic.
- 03a\_fullres\_BUN-02.pdf : Cross-section of slab BUN-2, including full-resolution x-ray mosaic.
- 04a\_fullres\_BUN-07.pdf : Cross-section of slab BUN-7, including full-resolution x-ray mosaic.
- 05a\_fullres\_BUN-08.pdf : Cross-section of slab BUN-8, including full-resolution x-ray mosaic.
- 06a\_fullres\_BUN-06.pdf : Cross-section of slab BUN-6, including full-resolution x-ray mosaic.
- 07a\_fullres\_BUN-05.pdf : Cross-section of slab BUN-5, including full-resolution x-ray mosaic.
- 08a\_fullres\_BUN-03.pdf : Cross-section of slab BUN-3, including full-resolution x-ray mosaic.
- 09a\_fullres\_BUN-04.pdf : Cross-section of slab BUN-4, including full-resolution x-ray mosaic.
- 11a\_fullres\_BUN-09A.pdf : Cross-section of slab BUN-9A, including full-resolution x-ray mosaic.
- 11b\_fullres\_BUN-09B.pdf : Cross-section of slab BUN-9B, including full-resolution x-ray mosaic.
- 11c\_fullres\_BUN-09C.pdf : Cross-section of slab BUN-9C, including full-resolution x-ray mosaic.
- 11d\_fullres\_BUN-09D.pdf : Cross-section of slab BUN-9D, including full-resolution x-ray mosaic.

### **A note on the reconstruction of the horizontal datum on the coral slab cross-sections:**

In the field, screws were placed in each slab and surveyed with a total station. In addition, various concentric rings on each head were surveyed in detail. The surveyed elevations of the screws were used to reconstruct the horizontality of the slab as we observed it in the field; the survey of the rings was then used to determine whether, and the extent to which, each head had been tilted prior to slabbing.

A line of small holes was drilled into each slab prior to the x-raying of the slices to mark horizontal. However, the methodology followed, and the significance of the lines of holes, are not uniform across all the slabs in this study. For heads collected in 2005 and 2006, the line of holes represents the *original* horizontal of the slab; in other words, we corrected for any tilting *before* drilling the holes. For heads collected in 2007 and 2009, the line of holes represents a horizontal datum *as we observed it* when we slabbed the head; correction for any tilting was done by computer in Adobe Illustrator ® *after* the slab x-rays were scanned and mosaicked. Any misalignment in the 2007 and 2009 heads between the line of holes and the red line marking original horizontal in the PDF files in this electronic supplement arises because the x-rayed cross-section was corrected for tilting.

The date of collection of each slab is provided in Table S1.