**Figure 5.5.** X-ray microscopy and SEM images of 1-month old coral skeletons under temperature-pCO$_2$ treatments. Treatments include; ‘Control’ (A-D), ‘High T’ (E-H), ‘High pCO$_2$’ (I-L) and ‘High T + pCO$_2$’ (M-P) conditions. 3D X-ray images: A, E, I and M show a top-down view; B, F, J and N show a side view, all 3D X-ray images have a scale bar of 500 µm. SEM images: C, G, K and O show the top of the corallite wall; D, H, L and P show a tertiary septum, all SEM images have a scale bar of 10 µm. All of the four images shown horizontally per treatment are of a single, representative individual. See Figures 5.7 to 5.10 for images of the other individuals from each treatment.
Figure 5.6. Fractures and deformed skeletal structures in high $pCO_2$ treated corals. A-D highlight fractures in the septa (A, B) and corallite wall (C, D). E and F show small sections of missing septa and synapticulae. G and H display gross deformities, with large sections of the skeleton missing or malformed.
Figure 5.7. All remaining individuals from the ‘Control’ (i.e. excluding the individual shown in Figure 5.5). Optical microscope photographs (A, F, K, P), 3D X-ray top-down (B, G, L, Q) and side view (C, H, M, R) images and SEM corallite wall (D, I, N, S) and tertiary septum (E, J, O, T) images are given for each individual. Individuals are presented horizontally (A-E, F-J, K-O and P-T). Scale bars are 500 µm for all optical and 3D X-ray images and 10 µm for all SEM images.
Figure 5.8. All remaining individuals from the ‘High T’ treatment (i.e. excluding the individual shown in Figure 5.5). Optical microscope photographs (A, F, K, P), 3D X-ray top-down (B, G, L, Q) and side view (C, H, M, R) images and SEM corallite wall (D, I, N, S) and tertiary septum (E, J, O, T) images are given for each individual. Individuals are presented horizontally (A-E, F-J, K-O and P-T). Scale bars are 500 µm for all optical and 3D X-ray images and 10 µm for all SEM images.
Figure 5.9. All remaining individuals from the ‘High pCO₂’ treatment (i.e. excluding the individual shown in Figure 5.5). Optical microscope photographs (A, F, K, P), 3D X-ray top-down (B, G, L, Q) and side view (C, H, M, R) images and SEM corallite wall (D, I, N, S) and tertiary septum (E, J, O, T) images are given for each individual. Individuals are presented horizontally (A-E, F-J, K-O and P-T). Scale bars are 500 µm for all optical and 3D X-ray images and 10 µm for all SEM images.
Figure 5.10. All remaining individuals from the ‘High T + pCO₂’ treatment (i.e. excluding the individual shown in Figure 5.5). Optical microscope photographs (A, F, K, P), 3D X-ray top-down (B, G, L, Q) and side view (C, H, M, R) images and SEM corallite wall (D, I, N, S) and tertiary septum (E, J, O, T) images are given for each individual. Individuals are presented horizontally (A-E, F-J, K-O and P-T). Scale bars are 500 μm for all optical and 3D X-ray images and 10 μm for all SEM images.