

Figure 1S: Scanning Electron Microscope (SEM) images of coral septa under 5 kx (A) and 10 kx (B) magnification. Skeletal crystals were imaged on a Hitachi TM1000 Tabletop SEM at the UCSC MACS facility at NASA/Ames. Under 5 kx magnification (A), it is clear that *B. elegans* skeletons are an aggregate of very densely packed, fine needle-like crystals that fan outward from a central point (c) (e.g. Cohen and McConnaughey, 2003; Cohen and Holcomb, 2009). The lengths of individual aragonite crystals were obtained from the 10 kx images using Imaging Processing and Analysis in Java (Image J, U.S. National Institute of Health) by measuring from the base to the tip of each needle-like crystal (d). Scale bars are 10  $\mu\text{m}$ .

