

**SCRATCHING THE DISCS: EVALUATING ALTERNATIVE HYPOTHESES FOR  
THE ORIGIN OF THE EDIACARAN DISCOIDAL STRUCTURES FROM THE  
CERRO NEGRO FORMATION, LA PROVIDENCIA GROUP, ARGENTINA**

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*Supplementary Material*

**This pdf file contains:**

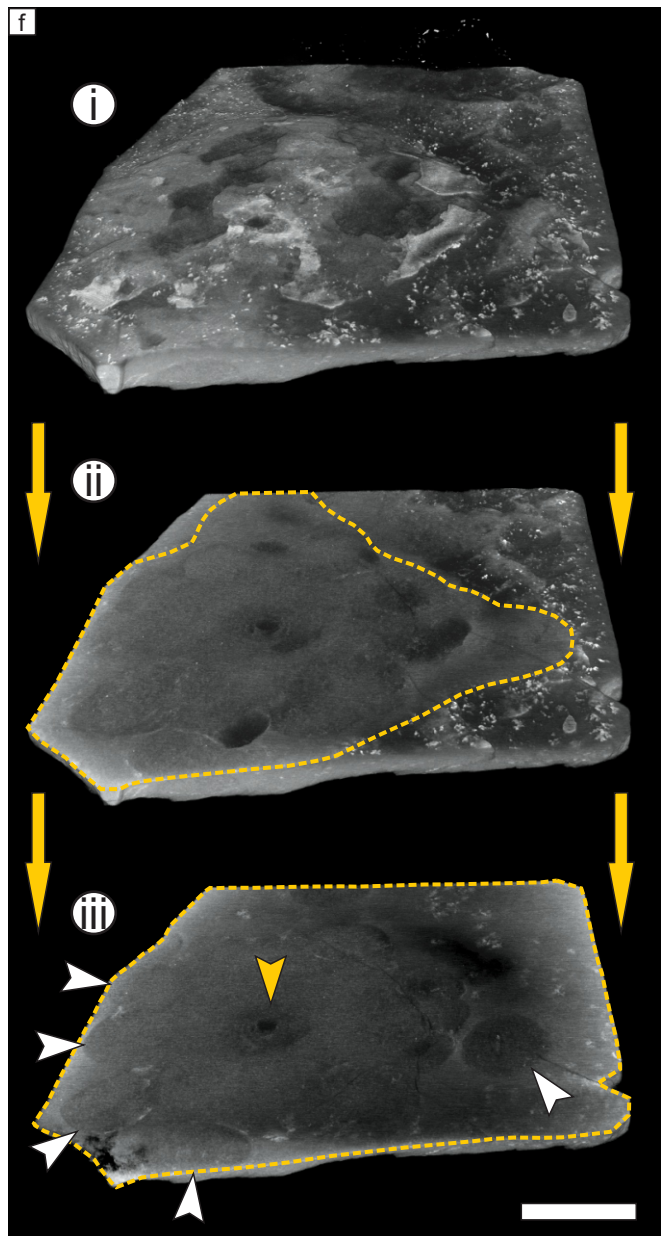
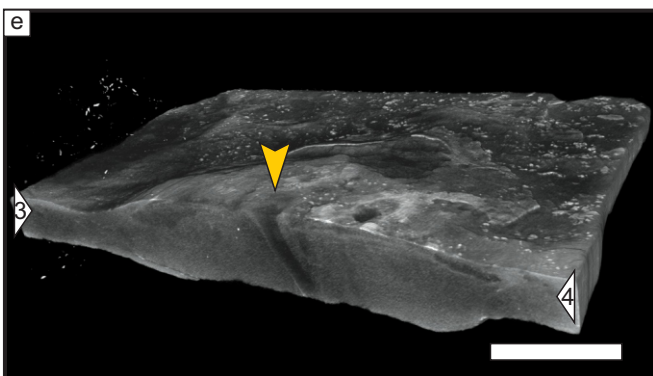
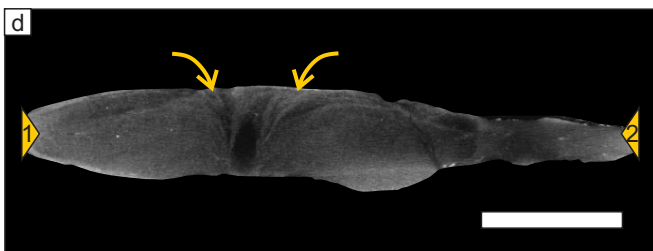
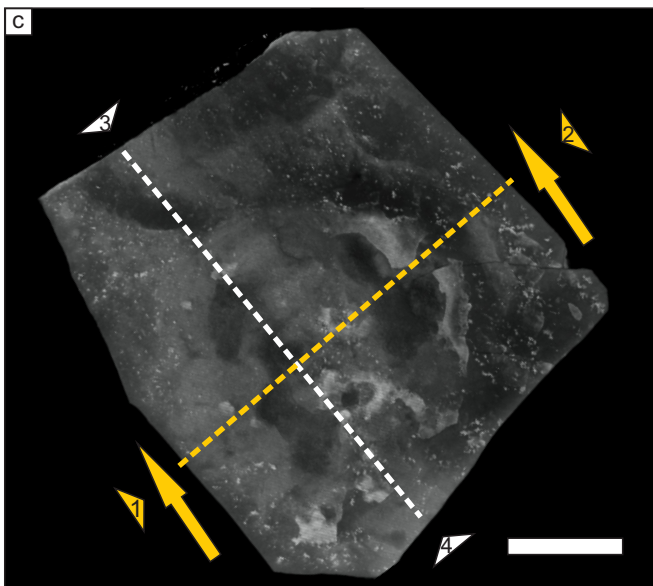
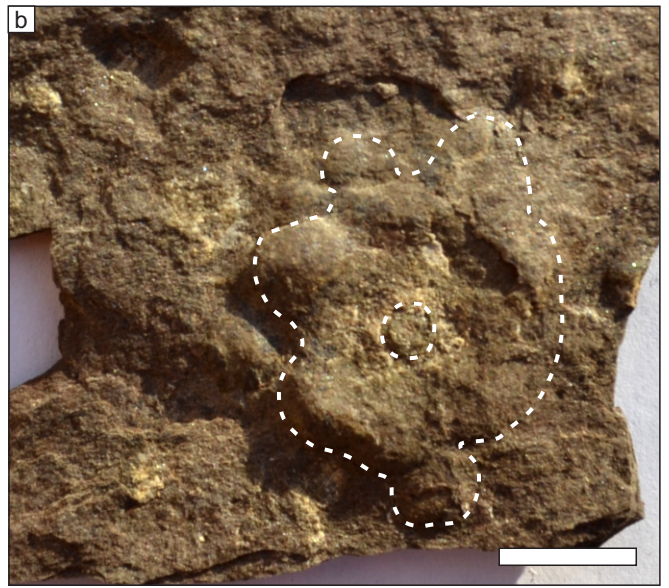
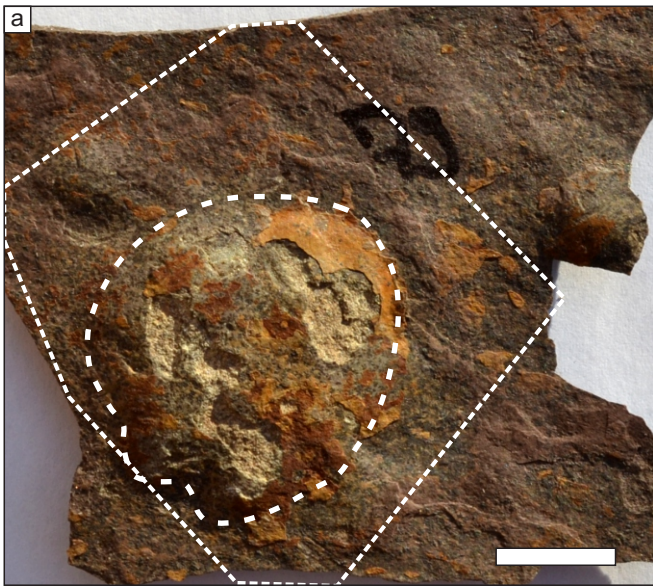
**Captions for Supplementary videos S1 and S2**

**Supplementary Figure S1**

**Supplementary Video S1.** Micro-CT scan of sample LC-02 showing the interior of the structure from a perpendicular to bedding perspective. Thin, bright coloured surfaces indicate higher density materials (e.g., iron oxides and sulphides) present in the sample. Slight contrasts in density are also given by grain composition (e.g., mud content, or phyllosilicate vs. quartz and feldspar). At 00:11 seconds, the funnel-shaped structure becomes visible at the centre of the object, marked by a dark coloured response (lower density), probably derived from less compacted (cement-rich) sediment infill within the structure. See figure S1 below for scale and further information.

**Supplementary Video S2.** Micro-CT scan of sample LC-02 revealing from a top-down perspective (parallel to bedding) the internal lobed patterning of the structure. Note the central conduit as it is being revealed, slightly decreasing its diameter from top (00:01 to 00:02 seconds) to bottom (approximately 00:04 seconds) due to its funnel-shaped geometry. Around 00:03 seconds, it is also noticeable the well-developed near circular lobes (slightly darker in colour) radially distributed around the conduit. See figure S1 below for scale and further information.

Supplementary Figure S1



**Supplementary Figure S1.** Photographs of scanned sample LC-02 and Micro-CT generated images revealing the internal patterning of the structure. (a) Epirelief view. Dotted lines indicate the general contours of the mound and the selected portion of the sample that was scanned; (b) Hyporelief view. Dotted line indicates the general contour of the radially distributed lobes; (c) Oblique view of the sample as reconstructed in the Micro-CT scanner. Yellow dotted line indicates the sectioned image in d, correspondent to 00:11 seconds in video S1. Yellow arrows indicate the sense of movement of the digital sectioning in video S1. White dotted line indicates another section illustrated in e, with a distinct orientation; (d) Section 1-2 correspondent to 00:11 seconds in video S1. Arrows point to the funnel-shaped aperture of the conduit; (e) Section 3-4 indicated by white dotted line in c. Yellow arrow points to the central slightly inclined conduit. (f) A sequence of images showing progressive bedding plan-oriented digital sectioning of the interior of the structure, similar to shown in video S2. Yellow arrows indicate the sense of movement of the digital sectioning. I - Oblique view of the entire sample; II - Shallower section roughly equivalent to 00:03 seconds in video S2; III - Deeper section roughly equivalent to 00:05 seconds in video S2. Small yellow arrow indicates the region of the central conduit, while white arrows indicate the position of distinct individual lobes. Scale bars: 1 cm.