**Sedimented Chemosynthetic Ecosystems of the Southern Ocean**

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**Supplementary Figure Captions**

**Chapter 3**

Supplement 3-1 – Macrofaunal assemblage composition (quantitative cores only, abundance per m2) and stable isotopic data. A = 0 – 5 cmbsf, B = 5 – 10 cmbsf

Supplement 3-2 – PLFA composition and abundance

Supplement 3-3 – Geochemical profiles (megacores and gravity core)

Supplement 3-4 – SEM Micrographs of the valves of several bivalve species. A = *Axinulus antarcticus*; B = *Propeleda longicaudata* and C = *Ennucula* sp. (cf. *georgiana*).

**Chapter 4**

Supplement 4-1 – Macrofaunal abundance by taxa (± S.E.) and site.

Supplement 4-2 – Macrofaunal biomass (dry weight) of select taxa, compared between sites

Supplement 4-3 – Geochemical data used to construct the hydrothermal index

Supplement 5-1 – Bulk isotopic data.

Supplement 5- 2 – PLFA data.

Supplement 5-3 – PLFA Abundances by site.

**Chapter 5**

Supplement 5-4 – nMDS plot of PLFA composition, with reference to PLFA suites from the Goban Spur (NE Atlantic) (Main et al. 2015) and Loki’s Castle hydrothermal sediments (Jaeschke et al. 2014).

Supplement 5-5 – Cluster dendrogram (Euclidean distance) for averaged CN isotopic signatures for species from vent and non-vent areas.

**Chapter 6**

Supplement 6-1 – Model code for Bransfield Off-Vent Site

Supplement 6-2 – Model code for Hook Ridge 1 Site

Supplement 6-3 – Model code for Hook Ridge 2 Site

Supplement 6-4 – Plots of averaged flows between all compartments