Figure 1 – Sampling locations. A, Sars Seamount, B Shackleton Fracture Zone. Inset: box indicates the area shown in larger figure.

Figure 2. *Aulocalyx irregularis*, specimen BELUM.Mc2015.308. A. Collected specimen. scale in cm; B. Skeletal framework, Scale bar 1000 µm, SEM; C. Pentactin, scale bar 100 µm, SEM, D. Discohexaster, scale bar 10 µm, SEM; E. Rhopalaster, scale bar 100 µm, SEM.
Figure 3. *Doconesthes robinsoni* sp. nov. Type specimen MNHNCL POR–15002. A. Freshly collected specimen, scale in cm; B. Rehydrated specimen, scale in cm; C. Atrium of rehydrated specimen, scale in cm; D. Hypodermal pentactin, illustration traced from light microscope image, scale 100 µm; E. Atrial hexactine, illustration traced from light microscope image, scale 100 µm F. End of choanosomal diactin, scale 200 µm, light microscope; G. Dermal diactin, scale 100 µm, light microscope; H. Hemioxyhexaster, scale 10 µm, SEM; I. Strobilopluristic, scale 10 µm, SEM, the frontal ray is missing.
Figure 4. *Sympagella walleri* sp. nov. Type specimen MNHNCL POR-15003, strobiloplumicome image G from BELUM.Mc2015.313. A. Collected specimen; B. End of diactin, scale bar 200 µm, light microscope; C. Dermal pentactin, scale bar 100 µm, illustration traced from light microscope image; D. Dermal hexactin, scale bar 100 µm, illustration traced from light microscope image; E. Pinular hexactin, scale bar 10 µm, SEM; F. Discohexaster, scale bar 10 µm, SEM; G, H. Strobiloplumicome, scale bar 10 µm, SEM.

Figure 5. *Caulophacus palmeri* sp. nov. Type specimen MNHNCL POR_15001. A. collected specimen, scale in cm; B. end of diactin, scale bar 10 µm, SEM; C. pentactin, scale bar 100 µm, illustration traced from light microscope image; D. hexactin, scale bar 100 µm, illustration traced from light microscope image; E. pinular hexactin, scale bar 10 µm, SEM; F. discohexactin, scale bar 10 µm, SEM.
Figure 6. *Rossella antarctica*: A. Collected specimen BELUM.Mc2015.284; B. Specimen BELUM.Mc2015.335; C. Rays of a calycocome from BELUM.Mc2015.284 (scale bar 10µm); D. Microdiscohexaster from BELUM.Mc2015.284 (scale bar 10 µm).