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A vertical wall in the Whittard Canyon with a novel community assemblage

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We describe a hitherto unreported community from a vertical wall in the Whittard Canyon system on the Atlantic Margin. The wall extended vertically for about 100 m from approximately 750 m depth. We explored the wall with an ROV and discovered an assemblage cominated by large limid bivalves Acesta excavata and deep-water oysters Neopycnodonte zibrowii at very high densities, particularly at overhangs. The assemblage also contained deep-water corals (including solitary corals). It had high numbers of flytrap anemones and had many mobile species associated with it including crustaceans such as Paramola cuvieri and Bathynectes longispina, echinoderms and fishes. We took CTD transects in the area of the wall and beam attenuation indicated nepheloid layers present in the water column. The greatest densities of suspended material at the ROV dive site were at the depth of the wall. We hypothesise that internal waves concentrate suspended sediment at the foot of the vertical wall. This may provide the resources to support the high density of large filter feeders at these depths.