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TITLE: Abyssal fauna of the UK-1 polymetallic nodule exploration area, Clarion-Clipperton Zone, central Pacific Ocean: Cnidaria

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ABSTRACT:

We present data from a DNA taxonomy register of the abyssal Cnidaria collected as part of the Abyssal Baseline (ABYSSLINE) environmental survey cruise 'AB01' to the UK Seabed Resources Ltd (UKSRL) polymetallic-nodule exploration area 'UK-1' in the eastern Clarion-Clipperton Zone (CCZ), central Pacific Ocean abyssal plain. This is the second paper in a series to provide regional taxonomic data for a region that is undergoing intense deep-sea mineral exploration for high-grade polymetallic nodules. Data were collected from the UK-1 exploration area following the methods described in Glover et al. (2015b).Morphological and genetic data are presented for 10 species and 18 records identified by a combination of morphological and genetic data, including molecular phylogenetic analyses. These included 2 primnoid octocorals, 2 isidid octocorals, 1 anemone, 4 hydroids (including 2 pelagic siphonophores accidentally caught) and a scyphozoan jellyfish (in the benthic stage of the life cycle). Two taxa matched previously published genetic sequences (pelagic siphonophores), two taxa matched published morphological descriptions (abyssal primnoids described from the same locality in 2015) and the remaining 6 taxa are potentially new species, for which we make the raw data, imagery and vouchers available for future taxonomic study. We have used a precautionary approach in taxon assignments to avoid over-estimating species ranges. The Clarion-Clipperton Zone is a region undergoing intense exploration for potential deep-sea mineral extraction. We present these data to facilitate future taxonomic and environmental impact study by making both data and voucher materials available through curated and accessible biological collections. For some of the specimens we also provide image data collected at the seabed by ROV, wich may facilitate more accurate taxon designation in coming ROV or AUV surveys.

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