The inspiration for this atlas came from a project locating all cold-water coral reefs and associated carbonate mounds on the Irish seabed. The fact that coral reefs even exist on Ireland’s deep-water seabed may come as a surprise to some readers but in fact this is an area of the world’s oceans where these cold-water features arguably reach their most impressive proportions and densities.

The detection of potential reefs only a few hundred metres wide required high resolution bathymetric (or seabed topographic) data. Fortunately, the Irish National Seabed Survey (INSS) has collected just such a data set over the course of a 6 year period starting in 1999. This represents an impressive and comprehensive mapping of the entire Irish deep-water seabed (deeper than 200 m) covering over half a million square kilometres and extending up to nearly a thousand kilometres off the west coast of Ireland. Using the INSS data, and funded by its successor INFOMAR, we were able to investigate a coherent 414,000 km² area of the world’s deep ocean seabed at a level of detail that has never been achieved before.

As we systematically scoured the maps for coral reefs and mounds, we discovered a plethora of other submarine features imaged in startling detail which were a wonder to see. We realised that the initially planned atlas of reef features represented just one aspect of what was of interest and felt somewhat obliged to “lift the curtain” on this deep and dark ocean realm.

We hope you will share our excitement in exploring Ireland’s deep-water seabed and maybe even become inspired to find out more about this hidden world several hundreds of metres below the sea surface. Our aim is to demonstrate that the oceans are not simply deep water-filled basins but contain fascinating “landscape” structures. These landscape features, such as submarine
canyons, seamounts, escarpments and mounds, are also home to a diverse array of complex habitats. We want to demonstrate the amazing variety and beauty of life on the deep-sea seabed. Our goal is to invite the reader on a voyage to the largely unexplored canyons, sub-sea mountains and cliffs of the Irish underwater realm.

Enjoy the trip!

The Authors
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Dorschel, B.; Wheeler, A.J.; Monteys, X.; Verbruggen, K.
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