be preserved in the deposits. But from what has been said as to the condition of these bones, it cannot be doubted that even the densest specimens would ultimately quite disappear if continually exposed at the bottom of the sea. In deposits where there is a more rapid accumulation, it is not improbable that these bones and teeth would be covered up by detrital matters, before being wholly dissolved, and being thus protected some remnants of them might be preserved in the beds now forming at the bottom of the ocean.

In the case of shells and other skeletal structures, like Corals, Molluscs, Foraminifera, and calcareous Algæ, there is likewise a difference in the extent to which they can resist the destructive effects of exposure to sea-water. Those which have a porous structure, with a large quantity of albuminoid matter in the shell or skeleton, disappear much more rapidly than those compact shells with a close texture, which consequently expose a relatively much smaller surface to the action of the surrounding water. As already indicated, the conchioline, that is, albuminoid matters associated with the calcareous structures, would at first, as shown by Bischoff, protect the calcareous structures; but when putrefaction sets in, the areolar structure and the decomposing organic matters would accelerate the solution of the calcareous shells and skeletons. In all cases, however, calcareous structures of all kinds are slowly removed from the bottom of the ocean on the death of the organisms, unless rapidly covered up by the accumulating deposits, and in this way protected to a certain extent from the solvent action of the sea-water. It is evident from the Challenger investigations that whole classes of animals with hard calcareous shells and skeletons, remains of which one might suppose would be preserved in modern deposits, are not there represented; although they are now living in immense numbers in the surface waters or on the deposits at the bottom, in some regions all trace of them has been removed by solution. A similar removal of calcareous organic structures has undoubtedly taken place in the marine formations of past geological eras.[1]

In the warm waters of the tropical regions of the ocean there is the greatest development of lime-secreting organisms. This is rendered evident not only by the vast organic accumulations known as coral reefs, but by what has been said above as to the number of pelagic species of calcareous Algæ, Foraminifera, and Molluscs, which inhabit the surface and subsurface waters of the tropics, and whose dead remains form organic accumulations at the bottom of the sea far exceeding in extent and importance those of coral reefs. On the other hand, there is a restricted development of these calcareous structures both in the cold waters of the deep sea and in those of the temperate and polar regions; it is observed that in the shells and skeletons of deep-sea animals there is a marked deficiency in carbonate of lime, and the same holds good, in a general sense, with the organisms in polar waters. The probable cause of this distribution has been indicated when treating of the changes produced by organisms in the constitution of sea-water salts.[2]

[1] Murray, "The Maltese Islands, with special reference to their Geological Structure," *Scot. Geogr. Mag.*, vol. vi. p. 482, 1890.

[2] See pp. 254–256.