

diminutive or few. Groups of large corals are characteristic of the intertropical seas, or at least of seas of either hemisphere that border on the tropics. I have seen an *Isastrea* of Helmsdale that measured about two feet and a half in length by about eighteen inches in breadth, and which, as I have said, a strong man could scarce raise from the ground; and arborescent masses of *Thecosmilia annularis* have been found in the Coral Rag of England, that measured from a foot and a-half to two feet in height. There occur no such corals now in seas which lie between the fiftieth and sixtieth degrees of latitude, whether to the south or north of the equator. And though I would not found much on one or two exceptional species, I do think that, seeing we would at once pronounce a similar group of recent corals to be the product of seas greatly warmer than our own, we might, I think, be permitted to infer, — reasoning from what we know, — that the Oolitic seas of what is now Scotland were of a higher temperature than our Scottish seas of the present day; and that, in short, in the corals of the Scotch Oolite we have one of many evidences that in this early period these northern regions enjoyed a greatly more genial climate than they do now. I may add, however, that in the same beds, mingled with fronds of cycas and zamia, and the stems of gigantic horsetails, — all now the productions of a warm climate, and that seem to give evidence to the same fact as the corals, — there occur numerous fragments, and occasionally whole trunks, of fossil pines, that apparently testify, by their annual rings of small size, indicative of slow growth, to a climate as ungenial and severe as that of Sweden or Norway. The evidence which they yield can, however, be scarce said to be of a conflicting character with that of the corals and the cycadites. If the Oolitic land was a lofty one, a very few miles might have served to separate a genial from a severe climate; and the pines might have been brought down by rivers from