

I found no regular strata containing sea-shells of recent species, excepting at this place, and at a few points northward on the road to Guasco. This fact appears to me highly remarkable; for the explanation generally given by geologists, of the absence in any district of stratified fossiliferous deposits of a given period, namely, that the surface then existed as dry land, is not here applicable; for we know, from the shells strewed on the surface and imbedded in loose sand or mould, that the land for thousands of miles along both coasts has lately been submerged. The explanation, no doubt, must be sought in the fact that the whole southern part of the continent has been for a long time slowly rising; and therefore that all matter deposited along shore in shallow water must have been soon brought up and slowly exposed to the wearing action of the sea-beach; and it is only in comparatively shallow water that the greater number of marine organic beings can flourish, and in such water it is obviously impossible that strata of any great thickness can accumulate. To show the vast power of the wearing action of sea-beaches, we need only appeal to the great cliffs along the present coast of Patagonia, and to the escarpments or ancient sea-cliffs at different levels, one above another, on that same line of coast.

The old underlying tertiary formation at Coquimbo appears to be of about the same age with several deposits on the coast of Chile (of which that of Navedad is the principal one), and with the great formation of Patagonia. Both at Navedad and in Patagonia there is evidence that since the shells (a list of which has been seen by Professor E. Forbes) there entombed were living, there has been a subsidence of several hundred feet, as well as an ensuing elevation. It may naturally be asked, how it comes that, although no extensive fossiliferous deposits of the recent period, nor of any period intermediate between it and the ancient tertiary epoch, have been preserved on either side of the continent, yet that at this ancient tertiary epoch sedimentary matter containing fossil remains should have been deposited and preserved at different points in north and south lines, over a space of 1,100